CULTURAL RESOURCES SURVEY OF THE UNION COUNTY INDUSTRIAL PARK EXPANSION, UNION COUNTY, SOUTH CAROLINA

Prepared By:
Michael Trinkley, Ph.D., RPA
and
Nicole Southerland

Prepared For:
Mr. Dan McPherson
HSMM, Inc.
PO Box 2646
Spartanburg, SC 29304

Chicora Research Contribution 335

Chicora Foundation, Inc.
P.O. Box 8664 ▪ 861 Arbutus Drive
Columbia, South Carolina 29202-8864
Email: chicora@bellsouth.net
www.chicora.org

August 13, 2001

This report is printed on permanent paper ∞.

ABSTRACT

This study reports on an intensive archaeological and cultural resources survey of a 98 acre expansion of the existing Union County Industrial Park in the central section of Union County, South Carolina. The work was conducted to assist HSMM, Inc. help their client comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The tract is to be used by Union County for the expansion of the existing industrial park, situated to the northwest and previously surveyed by Chicora Foundation in 1993.

The proposed expansion will require the clearing of the tract, followed by construction of various infrastructure elements, such as roads, stormwater drainage, and utilities. Individual lot construction may include grading, additional utility construction, paving parking lots, and construction of various facilities. These activities have the potential to affect archaeological and historical sites and this survey was conducted to identify and assess archaeological and historical sites which may be in the project tract. For this study an area of potential effect (APE) 1.0 mile around the proposed industrial park expansion was assumed. It should be noted, however, that a portion of the area is currently affected by an existing industrial park, so the actual effects may be difficult to determine.

Consultation with the S.C. Department of Archives and History revealed no previously identified NRHP sites or previously surveyed architectural sites within the 1.0 mile APE, although Union County has not received a comprehensive survey. An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology identified six sites within or immediately adjacent to the proposed expansion. Three sites were identified in 1978 as a result of a highway corridor. All were small lithic scatters. Three additional sites, including both prehistoric and historic remains, were identified in 1993 as a result of the initial industrial park survey.

The archaeological study of the tract incorporated shovel testing at 100-foot intervals on transects which were placed at 100-foot intervals running northeast from US 176. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 352 shovel tests were excavated in the survey tract.

One archaeological site, 38UN869, was identified as a result of these investigations. The site consists of a prehistoric surface scatter of lithics, with a single historic ceramic. The site is recommended not eligible for inclusion on the National Register of Historic Places, based on the limited data sets and the extensive erosion in the site area. Site 38UN869 lacks the ability to address significant research questions and no additional management activities are recommended, pending the review of the lead agency and the State Historic Preservation Office.

A survey of public roads within 1.0 mile of the proposed industrial park expansion was conducted in an effort to identify any architectural sites over 50 years old which also retained their integrity. Seven structures (Jonesville 0049-0053, 0056-0057) were identified, including one I-house, five massed plan structures, and one cottage. None are recommended eligible, primarily as a result of their loss of integrity.

Also identified was one cemetery, Jonesville-0054. Known as the Fairforest Cemetery, it is associated the Fairforest Baptist Church and likely originated in the late eighteenth century. The cemetery is recommended potentially eligible to the National Register under Criteria C and D. This cemetery is about 1,000 feet from the proposed expansion and abuts the existing industrial park. It is unlikely to be affected by the

undertaking, although we do recommend that a visual buffer be allowed between the industrial park and the cemetery, if possible.

The final site identified in the survey tract is the Union County Detention Center (Jonesville-0055), also known as the prison or chain gang camp. This facility has at least nine historic structures and dates from at least the 1940s and likely a decade earlier. The resource is recommended potentially eligible under Criterion C and may possibly be eligible under Criterion A. Since it is immediately adjacent to the proposed expansion, it is possible that the proposed project will affect the visual integrity of the site. We recommend that the industrial tract lots be designed to allow a 50 to 100 foot vegetative buffer.

Finally, it is possible that archaeological remains may be encountered in the corridor during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

This investigation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Dan McPherson of HSMM, Inc. of Spartanburg, SC. The work was conducted to assist HSMM comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project site consists of a 98 acre tract proposed to be used for the expansion of the existing Union County Industrial Park north of the City of Union west of SC 18 and bounded to the west by US 176 (Figure 1). The proposed extension is roughly rectangular in shape, measuring about 4,000 feet northwest-southeast by 1,500 feet southwest-northeast (Figure 2). The existing industrial park is only slightly smaller and situated immediately adjacent to the north.

The tract consists of areas of high undulating topography with some areas of low wetlands. The survey encountered sections of pine and mixed hardwood forests, wetlands, and second growth fields. The surrounding area, while on the outskirts of Union, still retains a rural character. Cattle are still found adjacent to the nearby Union County Detention Center and several of the larger neighboring tracts appear to have only gone out of cultivation in the past decade or two.

The tract, as previously mentioned, is intended to be used as an expansion to the existing industrial park. This work will require the construction of infrastructure, including utilities such as electrical lines, water, and sewer, as well as a road network opening the tract into available development lots. As industrial sites are developed there will be grading and construction of buildings, parking lots, and stormwater facilities. These activities have the potential to cause extensive damage to any archaeological resources which may be present on the tract.

Construction and subsequent daily operation may also have an impact on historic resources in the project area. Although there are no historic structures on the project tract, the proposed undertaking may detract from the visual integrity of nearby historic properties, creating what many consider discordant surroundings. The construction activities may create additional traffic, dust, and noise. The operation of individual facilities in the industrial park may produce additional long-term affects, including an increase in truck traffic, noise, and increased levels of light. As a result, an architectural survey was also conducted for the proposed undertaking, using an area of potential effect (APE) of about 1.0 mile around the proposed development tract.

This study, however, does not consider any future secondary impact of the project, including increased or expanded commercial or industrial development of this portion of Union County.

We were requested by Mr. Dan McPherson of HSMM to provide a technical and budgetary proposal for the survey on June 15, 2001. A proposal was provided the same day and was accepted by HSMM on July 30.

Prior to the field investigation we conducted a cultural resources background check for the proposed tract on July 31. This incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology. As a result of that work, six archaeological sites were identified within the immediate project area.

Three sites, 38UN24, 38UN25, and 38UN26, were recorded during a highway corridor survey in 1978 (Cable et al. 1978) The remaining three sites, 38UN485, 38UN486, and 38UN487, were recorded in 1993 as a result of Chicora's earlier survey of the initial development tract

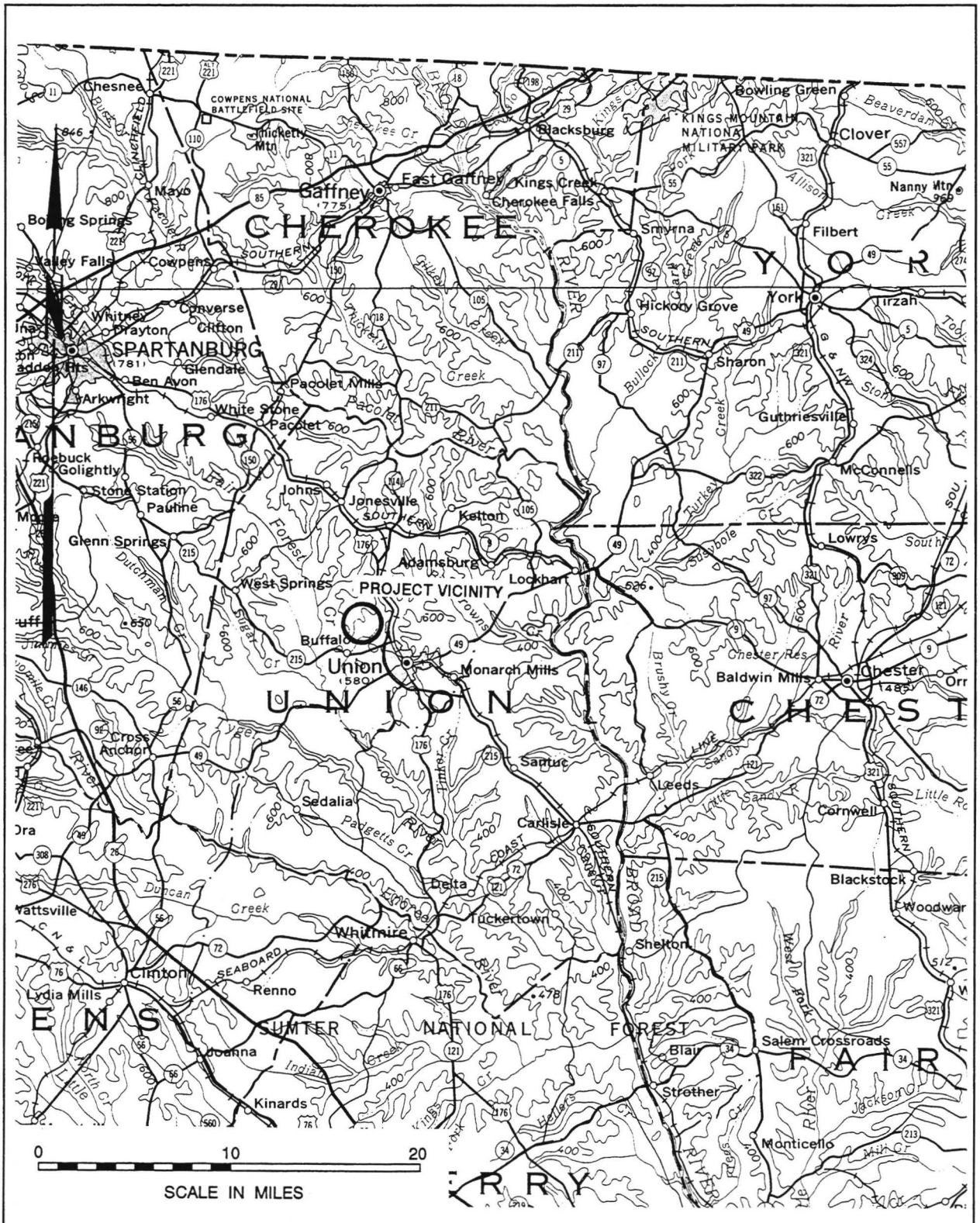

Figure 1. Project vicinity in Union County (basemap is USGS South Carolina 1:500,000).

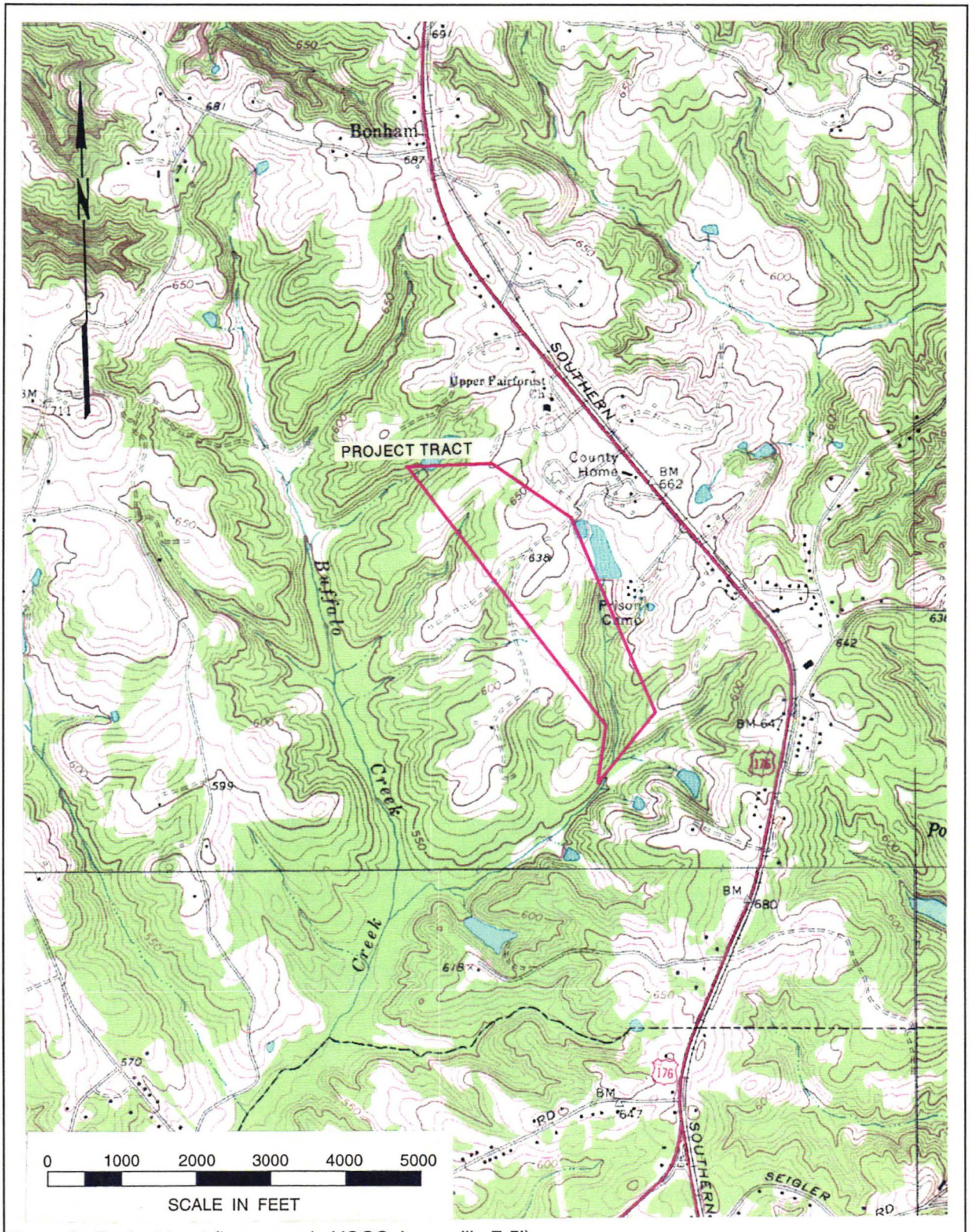

Figure 2. Project tract (basemap is USGS Jonesville 7.5').

(Adams 1993). While all three of these sites were previously determined not eligible, their presence did suggest the potential for the recovery of additional resources in the study area. The background research, however, also tempered expectations. The sites previously identified all exhibited extensive, and disastrous, erosion which had removed all A horizon soil. We realized that while sites might be found, they would likely exhibit low integrity.

In addition, the South Carolina Department of Archives and History GIS was consulted to check for any NRHP buildings, districts, structures, sites, or objects in the study area. No NRHP sites were found within a mile of the survey, although no comprehensive survey has been completed for Union County. In fact, the only detailed survey was that conducted for the City of Union in 1984-1985, when 388 sites were identified. Consequently, we found no previously identified properties in the 1 mile APE.

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files.

The archaeological survey was conducted from August 6-8, 2001 by Mr. Tom Covington and Ms. Nicole Southerland under the direction of Dr. Michael Trinkley and revealed one new archaeological site, 38UN869, situated within the proposed development tract. The site included a single historic ceramics, two quartz bifaces, a fragment of soapstone, and several flakes — all on the surface. No materials were found in shovel testing and the site appears to be entirely eroded. It is recommended not eligible for inclusion on the National Register.

The architectural survey of the APE, designed to identify any structures over 50 years in age which retain their integrity, revealed nine sites, including one cemetery, seven structures, and one prison camp, today the Union County Detention Center.

The cemetery, Jonesville-0054, is recommended potentially eligible under Criterion C, distinctive design or physical characteristics, and Criterion D, potential to provide important information about prehistory or history. The cemetery abuts the existing industrial park and will be about 1,000 feet northeast of the proposed expansion. While the existing industrial tract may, ultimately, have an effect on the visual integrity of the cemetery, it is unlikely that the new expansion will.

The seven structures all exhibit varying degrees of modification so that their integrity has been compromised. All are recommended not eligible and no further assessment of impact was conducted.

The prison camp (Jonesville-0055), today called the detention center, abuts the proposed industrial tract to the west. It consists of a series of buildings which continue to convey the architecture, associations, and feel of southern prison labor camps. Consequently, we recommend the site as potentially eligible for inclusion on the National Register under Criteria C, distinctive design or physical characteristics. Since one of the core elements in the placement of these camps was their rural nature, the location of the industrial tract will continue to degrade the rural character of the location and may affect the site. We recommend the use of a visual barrier, such as a vegetative planting, in order to separate the detention center from the industrial park.

Laboratory work and report production was conducted at Chicora's laboratories in Columbia, South Carolina from August 9-10. An archaeological site form, for the new site identified during this investigation, has been filed with the South Carolina Institute of Archaeology and Anthropology (SCIAA). The field notes, artifact catalog, and artifacts resulting from these investigations will be curated at SCIAA using their accessioning and cataloging system once the project is complete. All records and duplicate copies will be provided to SCIAA and will be maintained by that institution in perpetuity. The only photographic materials associated with this project are color prints, which are not archival. The negatives and prints for these photographs are retained by Chicora Foundation. Architectural site forms have been forwarded to HSMM to be

conveyed to the State Historic Preservation Office with the submission of this report.

NATURAL ENVIRONMENT

Physiography

Union County is bounded to north by the Pacolet River and Cherokee County; to the east by the Broad River and York, Chester, and Fairfield counties; to the south by the Enoree and Tyger rivers, and Laurens and Newberry counties; and to the west by Spartanburg County. The county is roughly rectangular in shape and it falls into the Piedmont region of northwest-central South Carolina (Figure 1).

Characteristic of the piedmont, the rivers and smaller streams in the area form a dendritic drainage pattern. Throughout the piedmont the terrain has been extensively dissected and degraded. The region, lying between the Saluda River to the west and the Broad River to the east, has an eastward slope, in the general direction of the major drainages. In contrast, the study tract is situated on the edge of west facing ridge slopes overlooking Buffalo Creek to the west. Consequently, the survey area slopes to the southwest (Figure 2).

As will be discussed below, geologically this is a dissected peneplain and the region has a rolling topography. At least two major drainages are found in the study area, one at the north end and the other at the south.

Elevations in Union County range from about 500 to 700 feet above mean sea level (AMSL), although the lowest point, about 350 feet AMSL, is at the confluence of the Tyger and Broad rivers (Camp et al. 1975). In the study tract elevations range from about 580 feet AMSL in a drainage south of the Union County Detention Center to 670 feet AMSL on the ridges west of the Ellen Sagar Nursing Home. Much of the topography, even in this small study area, has been artificially affected by agricultural activities. Terracing is a common feature on the slopes, having been constructed as a means to control the extraordinary erosion of the early twentieth century. More recently the region has been characterized by silvacultural activities.

Geology and Soils

Most of the rocks of the Piedmont are gneiss and schist, with some marble and quartzite (Haselton 1974). Some less intensively metamorphosed rocks, such as slate, occur along the eastern part of the province from southern Virginia to Georgia. This area, called the Slate Belt, is characterized by slightly lower ground with wider river valleys. Consequently, the Slate Belt has been favored for reservoir sites (Johnson 1972).

In Union County the underlying geology consists primarily of granite, gneiss, schist, gabro, diorite, and alluvium. Dikes of material derived from minor rocks intrude into these major strata (Camp et al. 1975:62). The soils of the area are derived from the weathering of these materials.

The bulk of the survey tract consists of Madison soils. In the less steeply sloping areas, especially those previously under cultivation, the dominant soil is Madison sandy loam with 2-6% slopes, although slopes up to 10% are found. Under good conditions this soil exhibits an Ap horizon of grayish-brown (10YR5/2) sand loam about 0.5 foot in depth overlying a B horizon of red (2.5YR4/6) clay loam. By a depth of about 1.4 feet this has graded into a red (2.5YR4/6) clay. Although some areas were found with remnant Ap horizons, we found that much of the soil had been completely eroded away. Often it was impossible to determine whether the A horizon present represented an old plowzone or newly developing soil.

Also present in a few areas of the study tract with slopes of up to 10% is Madison sandy clay loam. In these areas the surface layer is a

reddish-brown (5YR4/4) sandy clay loam. Erosion in these areas is far more common. Camp et al. (1975:23) report that the Madison sandy clay loam soils with less than a 6% slope frequently exhibit galled areas, while those soils with slopes up to 10% often evidence gullies, rills, and galled areas.

In the drainages and their side slopes a common soil was the Madison-Pacolet series with 15-40% slopes. The surface layers are a gravelly sandy loam and moderately deep gullies may be present.

Trimble (1974:15) identifies Union County as belonging to what he calls the "High Ante-Bellum ELU with Post-Bellum Continuation." He projects erosion of up to a foot of soil during nineteenth and early twentieth agricultural activities.

This was an area of extensive cotton planting. Mills (1972 [1826]) noted that while erosion was a problem, even in the first quarter of the nineteenth century, crops did well in the district:

> Clay is predominant in this district, mixed with sand, gravel, and rock. The county is very broken, and rolling; the land subject to wash. Where this is not the case, it is cultivated to great advantage . . . . The soil is very well adapted to the culture of cotton, particularly the lower parts of the district; the low grounds to Indian corn, and the high lands to wheat, rye, oats, barley, pease, and pumpkins. The sweet and Irish potato grows very well here (Mills 1972 [1826]:754-755).

Mills went on to warn that the situation was especially severe in Union:

> Large bodies of once good land have been destroyed by this mode of working it; and it is much to be feared, that, if a change does not soon take place, this district, instead of increasing, will decrease, in population, by the emigration of its citizens to the western country (Mills 1972 [1826]:755).

In spite of this early warning, the South Carolina Department of Agriculture, Commerce, and Immigration, as late as 1907, saw no reason to remark on the threat of erosion, noting only that the region was characterized by "very fertile valleys" and that adjacent Laurens, with no less erosion than Union, was considered the "second best cotton lands" in the state.

The problem continued to worsen, so that the *Reconnaissance Erosion Survey* (Lowry 1934) found most of the project area to be characterized by moderate sheet erosion and occasional gullies, although a few areas were noted as having severe sheet erosion. It was only with the agricultural reforms beginning in the 1930s and 1940s that this erosion was brought under control.

Today the soils are largely stable if less vegetated and there is evidence that a new A horizon may be forming in some areas. Erosion, however, has been heightened where logging has taken place. In such areas the Department of Agriculture (1983:25) suggests that logging can contribute about 0.36 ton of soil loss per year per acre (compared to the loss of 0.03 ton per year per acre in undisturbed areas).

Climate

Mills described the climate of Union as, "equable, mild, and temperate," going on to remark that its citizens "enjoy, generally, as good health as falls to the lot of any people" (Mills 1972 [1826]:760). The only significant problem he notes is the "bilious fevers" which were found in the lowlands, particularly around drainages during the autumn. This view was repeated in the 1907 account, when the city of Union was described as having "a delightfully healthful climate" (South Carolina Department of Agriculture, Commerce, and Immigration 1907:570).

Even today the climate is described as

Figure 3. Open fields in the survey tract.

temperate and is characterized by generally mild winters and rather warm summers. Rainfall measures about 47 inches a year with the wettest months historically being March and July, with May and October being the driest months. During the summer the temperatures reach 90°F or higher an average of 68 days per year. The winters are mild, and temperatures reach 32°F on at least half of the winter days.

The growing season lasts from about April 14 through October 31, accounting for the variety of crops readily grown in the region. Early freezes in the autumn and late frosts in the spring can reduce this period by as much as 20 days (Landers 1975:63). Consequently, most cotton planting, for example, did not take place until early May, avoiding the possibility that a late frost would damage the young seedlings.

Almost a third of the precipitation falls during the summer growing season, although droughts are common. Perhaps the best wide-scale example of this was the drought of 1845 which caused a series of very serious grain and food shortages throughout the state.

Floristics

Piedmont forests generally belong to the Oak-Hickory Formation as established as Braun (1950). The potential natural vegetation of the Union County area is the Oak-Hickory-Pine Forest,

Figure 4. Wooded survey area.

composed of medium tall to tall forests of broadleaf deciduous and needleleaf trees (Küchler 1964). The major components of this ecosystem include hickory, shortleaf pine, loblolly pine, white oak, and post oak.

In actuality, the Piedmont is composed of a patchwork of open fields, pine woodlots, hardwood stands, mixed stands, and second growth fields. Shelford (1963) includes the Carolina Piedmont in the Oak-Hickory zone of the Southern Temperate Deciduous Forest Biome. The floodplain forests include sweetgum, tulip poplar, ash, elm, and red maple. Beyond the floodplain are small sections of mixed mesophytic woodlands, which are typified by tulip poplar, beech, red oak, white oak, and hickories. The forest is open, allowing for the development of a shrub layer with numerous herbaceous species.

Mills noted that in the early nineteenth century there were few pine,

> but the principal timber trees are, the various species of oak, the hickory, poplar, maple, black walnut, chestnut, sycamore, birch, dogwood, persimmon, locust, beech, ash, and several others (Mills 1972 [1826]:761).

He also observes that fruit trees, likely at area plantations, included peach, apple, plum, pear, and nectarine. Many of these fruit trees are difficult to grow in the piedmont today because of the colder winters.

The study tract today bears little resemblance to the piedmont of 1826. Sections have been cleared for agriculture and are today growing up in second growth or noxious briars. While the old field areas are relatively accessible, some lowlands exhibited dense woods. These areas, however, were generally on steep slopes where the probability of archaeological remains is low and the evidence of erosion is high.

PREHISTORIC AND HISTORIC SYNOPSIS

Prehistoric Overview

Overviews for South Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some general overviews (such as Sassaman et al. 1990 and Goodyear and Hanson 1989). Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and by Anderson et al. (1992) for the Paleoindian and Early Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I.* Figure 19 offers a generalized view of South Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965). Oliver (1981, 1985) has proposed to extend the Paleoindian dating in the North Carolina Piedmont to perhaps as early as 14,000 B.P., incorporating the Hardaway Side-Notched and Palmer Corner-Notched types, usually accepted as Early Archaic, as representatives of the terminal phase. This view, verbally suggested by Coe for a number of years, has considerable technological appeal.[1] Oliver suggests a continuity from the Hardaway Blade through the Hardaway-Dalton to the Hardaway Side-Notched, eventually to the Palmer Side-Notched (Oliver 1985:199-200). While convincingly argued, this approach is not universally accepted.

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie 1992). They reveal a widespread distribution across the state (see also Anderson 1992:Figure 5.1) with at least several concentrations relating to intensity of collector activity. What is clear is that points are found fairly far removed from the origin of the raw material. Charles and Michie suggest that this may "imply a geographically extensive settlement system" (Charles and Michie 1992:247).

Although data are sparse, one of the more attractive theories that explains the widespread distribution of Paleoindian sites is the model tracking the replacement of a high technology forager (or HTF) adaptation by a "progressively

---

[1] While never discussed by Coe at length, he did observe that many of the Hardaway points, especially from the lowest contexts, had facial fluting or thinning which, "in cases where the side-notches or basal portions were missing, . . . could be mistaken for fluted points of the Paleo-Indian period" (Coe 1964:64). While not an especially strong statement, it does reveal the formation of the concept. Further insight is offered by Ward's (1983:63) all too brief comments on the more recent investigations at the Hardaway site (see also Daniel 1992).

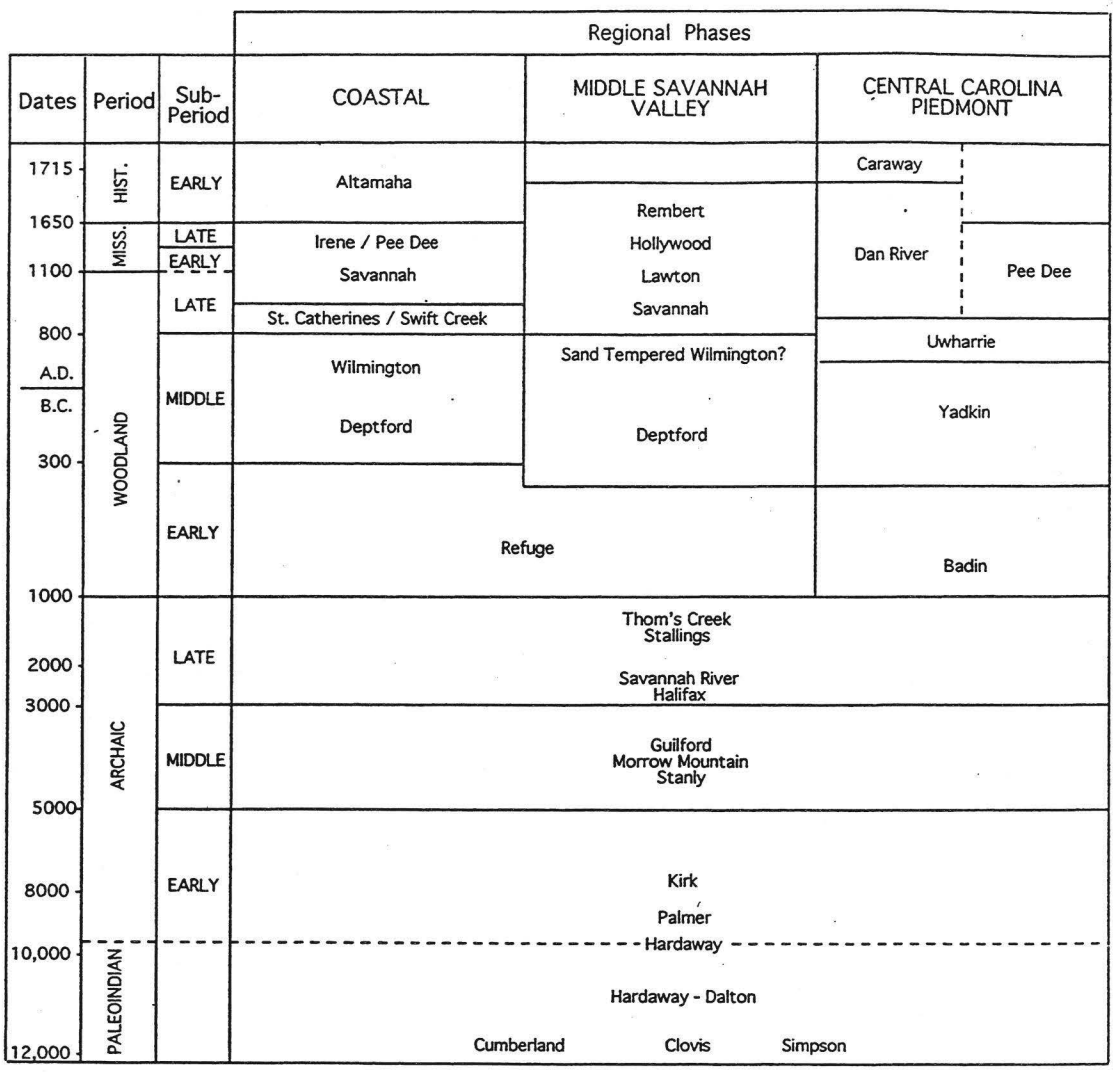

Figure 5. A generalized cultural sequence for South Carolina.

more generalized band/microband foraging adaption" accompanied by increasingly distinct regional traditions (perhaps reflecting movement either along or perhaps even between river drainages) (Anderson 1992:46).

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by

stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[2], does not form a sharp break with the Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As previously discussed, Palmer points may be included with either the Paleoindian or Archaic period, depending on theoretical perspective. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Much is not well known.

[2] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the Sandhills, unfortunately,

of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

Among the most common of all Middle Woodland artifacts is the Morrow Mountain Stemmed projectile point. Originally divided into two varieties by Coe (1964:37,43) based primarily on the size of the blade and the stem. Morrow Mountain I points had relatively small triangular blades with short, pointed stems. Morrow Mountain II points had longer, narrower blades with long, tapered stems. Coe suggested a temporal sequence from Morrow Mountain I to Morrow Mountain II. While this has been rejected by some archaeologists, who suggest that the differences are entirely related to the life-stage of the point, the debate is far from settled and Coe has considerable support for his scenario.

The Morrow Mountain point is also important in our discussions since it represents a departure from the Carolina Stemmed Tradition. Coe has suggested that the groups responsible for the Middle Archaic Morrow Mountain (and the later Guilford points) were intrusive ("without any background" in Coe's words) into the North Carolina Piedmont, from the west, and were contemporaneous with the groups producing Stanly points (Coe 1964:122-123; see also Phelps 1983:23). Phelps, building on Coe, refers to the Morrow Mountain and Guilford as the "Western Intrusive horizon." Sassaman (1995) has recently proposed a scenario for the Morrow Mountain groups which would support this west-to-east time-transgressive process. Abbott and his colleagues, perhaps unaware of Sassaman's data, dismiss the concept, commenting that the shear distribution and number of these points "makes this position wholly untenable" (Abbott et al. 1995:9).

The controversy surrounding Morrow Mountain also includes its posited date range. Coe (1964:123) did not expect the Morrow Mountain to predate 6500 B.P., yet more recent research in Tennessee reveals a date range of about 7500 to 6500 B.P. Sassaman and Anderson (1994:24) observe that the South Carolina dates have never matched the antiquity of their more western counterparts and suggest continuation to perhaps as late as 5500 B.P. In fact they suggest that even later dates are possible since it can often be difficult to separate Morrow Mountain and Guilford points.

A recently defined point is the MALA. The term is an acronym standing for Middle Archaic and Late Archaic, the strata in which these points were first encountered at the Pen Point site (38BR383) in Barnwell County, South Carolina (Sassaman 1985). These stemmed and notched lanceolate points were originally found in a context suggesting a single-episode event with variation not based on temporal variation. The original discussion was explicitly worded to avoid application of a typology, although as Sassaman and Anderson (1994:27) note, the "type" has spread into more common usage. There are possible connections with both the Halifax points of North Carolina and the Benton points of the middle Tennessee River valley, while the "heartland" for the MALA appears confined to the lower middle Coastal Plain of South Carolina.

The available information has resulted in a variety of competing settlement models. Some argue for increased sedentism and a reduction of mobility (see Goodyear et al. 1979:111). Ward argues that the most appropriate model is one which includes relatively stable and sedentary hunters and gatherers "primarily adapted to the

varied and rich resource base offered by the major alluvial valleys" (Ward 1983:69). While he recognizes the presence of "inter-riverine" sites, he discounts explanations which focus on seasonal rounds, suggesting "alternative explanations . . . [including] a wide range of adaptive responses." Most importantly, he notes that:

> the seasonal transhumance model and the sedentary model are opposite ends of a continuum, and in all likelihood variations on these two themes probably existed in different regions at different times throughout the Archaic period (Ward 1983:69).

Others suggest increased mobility during the Archaic (see Cable 1982). Sassaman (1983) has suggested that the Morrow Mountain phase people had a great deal of residential mobility, based on the variety of environmental zones they are found in and the lack of site diversity. The high level of mobility, coupled with the rapid replacement of these points, may help explain the seemingly large numbers of sites with Middle Archaic assemblages. Curiously, the later Guilford phase sites are not as widely distributed, perhaps suggesting that only certain micro-environments were used (cf. Ward [1983:68-69] who would likely reject the notion that substantially different environmental zones are, in fact, represented).

Recently Abbott et al. argue for a combination of these models, noting that the almost certain increase in population levels probably resulted in a contraction of local territories. With small territories there would have been significantly greater pressure to successfully exploit the limited resources by more frequent movement of camps. They discount the idea that these territories could have been exploited from a single base camp without horticultural technology. Abbott and his colleagues conclude, "increased residential mobility under such conditions may in fact represent a common stage in the development of sedentism" (Abbott et al. 1995:9).

From excavations at a Sandhills site in Chesterfield County, South Carolina, Gunn and his colleague (Gunn and Wilson 1993) offer an alternative model for Middle Archaic settlement. He accepts that the uplands were desiccated from global warming, but rather than limiting occupation, this environmental change made the area more attractive for residential base camps. Gunn and Wilson suggest that the open, or fringe, habitat of the upland margins would have been attractive to a wide variety of plant and animal species.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with, the bulk of our data for this period coming from the Uwharrie region in North Carolina.

One of the more debated issues of the Late Archaic is the typology of the Savannah River Stemmed and its various diminutive forms. Oliver, refining Coe's (1964) original Savannah River Stemmed type and a small variant from Gaston (South 1959:153-157), developed a complete sequence of stemmed points that decrease uniformly in size through time (Oliver 1981, 1985). Specifically, he sees the progression from Savannah River Stemmed to Small Savannah River Stemmed to Gypsy Stemmed to Swannanoa from about 5000 B.P. to about 1,500 B.P. He also notes that the latter two forms are associated with Woodland pottery.

This reconstruction is still debated with a number of archaeologists expressing concern with what they see as typological overlap and ambiguity. They point to a dearth of radiocarbon dates and good excavation contexts at the same time they express concern with the application of this typology outside the North Carolina Piedmont (see, for a synopsis, Sassaman and Anderson 1990:158-162, 1994:35).

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and

pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sandhills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. These sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included are Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery which is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series found in the Sandhills and their association with coastal plain and piedmont types. The earliest pottery found at many sites may be called either Deptford or Yadkin, depending on the research or their inclination at any given moment.

The Deptford phase, which dates from 3050 to 1350 B.P., is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Inner Coastal Plain/Sand Hills, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98; see also Sassaman 1993 for similar data recovered from 38AK157).

Further to the north and west, in the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[3] This pottery is identified as having very fine

[3] The ceramics suggest clear regional differences during the Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there "marked distinctions" between the pottery from the Buggs Island and Gaston Reservoirs and that from the south-central Piedmont.

sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are reported from South Carolina sites.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P. coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993)

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Historic Overview

Historical accounts of the territory encompassing the Union County area began with the DeSoto expedition in 1540 (Swanton 1946). This territory was recognized by the Indians and the early settlers to be the hunting grounds of the Lower Cherokee (Logan 1859:6). During these early years, the principal source of interaction between the European settlers and the Cherokee involved a loosely organized trading network.

After the establishment of South Carolina in 1670, organization and delineation into more manageable territorial units began. In 1785, the Proprietors sectioned the new province into four counties. Present Union County was included in the largest of these, Craven County, although generally the boundary line for Craven is drawn in vicinity of Lake Marion northeastward to Kingstree. Nevertheless, Union remained Indian land until 1755 (Camp et al. 1975:1).

In 1769 the Ninety-Six District was created as one of the seven original judicial districts in South Carolina. Until 1791 it contained what are today the counties of Edgefield, McCormick, Abbeville, Laurens, Saluda, Union, Spartanburg, most of Cherokee and Newberry counties, as well as portions of Aiken and Greenville counties.

An early sparse influx of settlers from the north was composed mainly of cattlemen and Indian traders. These semi-permanent settlements were concentrated along the streams and rivers where land was productive and easily cleared. The first settlements in Union County were along Broad River, Browns Creek, and Tyger River (Camp et al. 1975:1). After the initial settlements of the 1750s the white population did not increase until 1761, with the expulsion of the Native American population at the end of the Cherokee War (Latimer 1924:410). The second wave of settlement was spearheaded by farmers from the northern colonies of North Carolina, Virginia, Maryland, and Pennsylvania. The new farmers developed a self-sufficient system by planting flax, tobacco, corn, wheat, and oats and raising hogs and cattle for their own use (Latimer 1924:410).

At the outset of the Revolutionary War, the population of the Carolina backcountry was quite diverse in its ethnic and religious background. These differences seemed to localize the hostilities with loyalists and rebels living side by side. In 1775, in an attempt to consolidate the revolutionary forces, William Drayton and William Tennent, were sent into the Piedmont territories to raise local forces.

Union County saw much fighting during the American Revolution. Mills (1972[1826]:762) states that,

> Union suffered much during the revolution, from its exposure to the depredations of the tories and Indians. Col. Williams, of the district of Ninety-six, on the 18th of August, 1780, attacked a considerable party of British and tories, at Musgrove's mills, on the Enoree river, south-west corner of the district. Col. Innis, of the South Carolina royalists, was wounded, and the whole of his party obliged to retire. Previous to this, (July 12th,) Sumter defeated a detachment of British troops, and a large body of tories, at Williams' plantation, near Broad river. In November following, at the Fishdam ford, on the same river, Gen. Sumter, aided by the gallant Colonel Thomas Taylor, defeated Major Weyms, commanding a corps of infantry and dragoons; and took this officer prisoner. On the 20th of the same month, occurred the noted battle of the Black stocks, at the crossing of the Tyger river, near the west line of the district; where General Sumter defeated Lieut. Colonel Tarleton, at the head of a considerable body of horse and infantry. The action was severe, and obstinate. The killed and wounded of the British were many...(Mills 1972[1826]: 762).

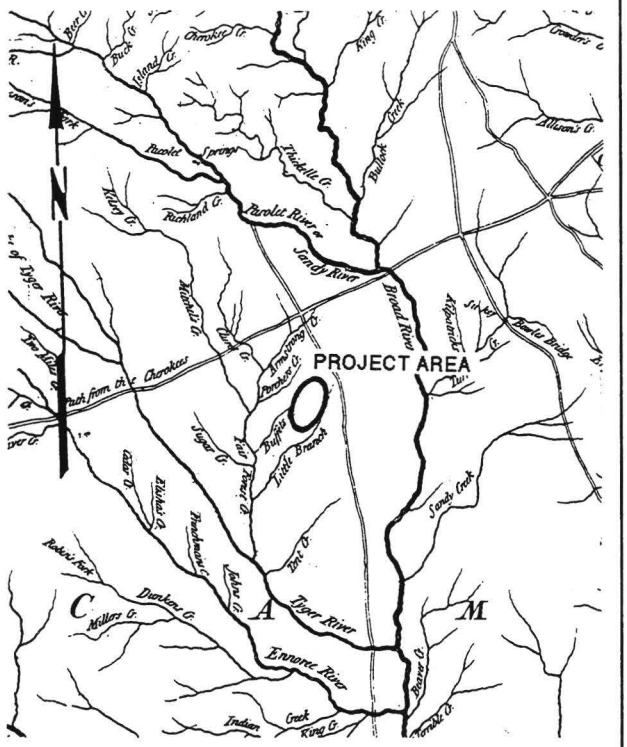

Figure 6. Mouzon's 1775 map showing the project area.

He also added that frequent skirmishes occurred between the Americans and their adversaries on the Enoree, Broad, and Tyger rivers.

Mouzon's 1775 *An Accurate Map of North and South Carolina* (Figure 6) shows the project area as available for settlement, but largely open. North of Union Mouzon shows the intersection of two major trading paths — one from the "Cherokees" northeastward into North Carolina and another from the Pacolet River paralleling the Broad River to what would become Columbia and from there continuing southward to the coast.

In 1785 the state legislature formed Union, encompassing present-day Union County as well as a portion of neighboring Cherokee County. By 1791 Pinckney District was created, incorporating what are today Spartanburg, Cherokee, York, Chester, and Union counties. In 1800 Union

District was created from Pinckney, using the boundaries of the present county.

Although the town of Union, then called Unionville, was established by 1791, around the "Union" church where Episcopalian and Presbyterian congregations met, it was at least briefly eclipsed by the rise of Pinckneyville on the Broad River. Pinckneyville acquired the district courthouse and jail, and was a thriving community for a short period of time before being abandoned in favor of Unionville.

By 1800 the district's population was 10,277. Of those, 1,697 (or 16.5%) were slaves. By 1820, the population had increased to 14,126 with 4,278 (or 30.3%) being slaves. In the 1820s Mills (1972 [1826]:760) noted that while the population was still increasing, it was "considerably retarded by emigrations to the western states; principally at present, to Alabama." Mills notes that Unionville contained about 20 houses and had 200 residents.

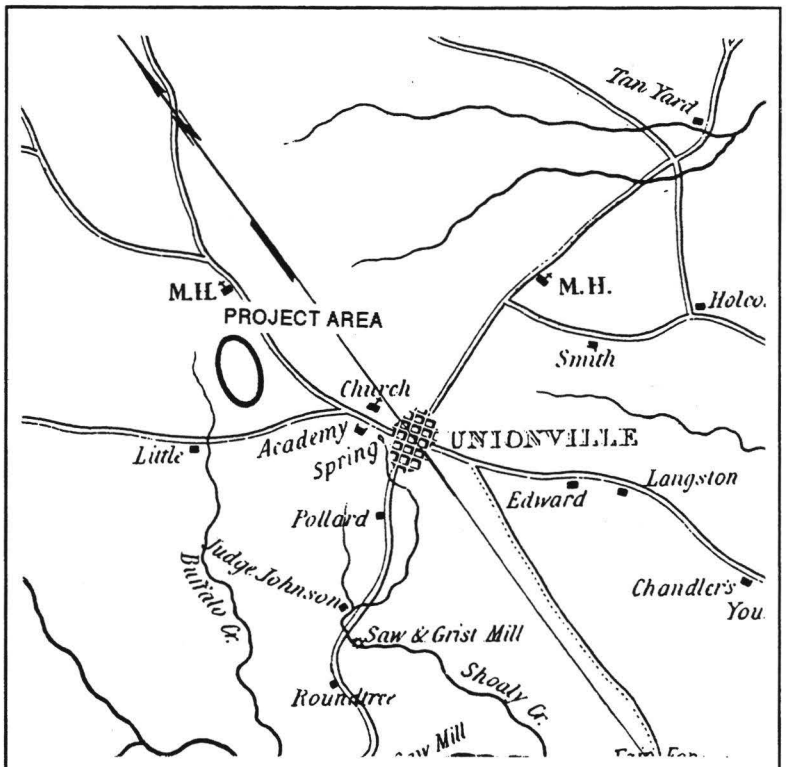

Figure 7. Mills' 1825 *Atlas* showing the project area.

Mills' Atlas (1825) shows that while rivers and streams were important to settlement, the emerging road network greatly influence the nineteenth century settlement pattern. Brooks and Crass (1991) and Taylor (1984) have noted the increased influence of road networks on settlement patterning of the nineteenth century. The atlas also shows a large number of grist and saw mills indicating their importance to the area. Figure 7 shows the project area in relation to features on Mills' *Atlas* (1825). While other settlements probably existed in the area, the only feature in the vicinity of the study tract is a Meeting House. This is very likely Upper Fairforest Church near the township of Bonham. Lead by the Reverend Philip Mulkey, a group of Baptists established the Fairforest Meeting in 1762 (see Edgar 1998:183). The current church building, while thought to be in the approximate area, is a modern building. The adjacent cemetery, based on marked stones, seems to date no earlier than the mid-nineteenth century although fieldstones and unmarked graves likely reflect its earlier creation. The WPA Guide observes that "buried in the wall-enclosed plot are members of the Means family, who furnished soldiers for the Revolution" (Writers' Program 1941:215).

The 1830s were a period of emerging fluorescence for this area. The invention of the cotton gin in the late eighteenth century, improved roads, and seemingly limitless water power, provided for the beginnings of a cotton manufacture in 1830 with the first cotton mills appearing on the Tyger River as early as 1816-1818 (Kennedy 1940:73). Edgar reports that by 1810 the lower piedmont, including Union, was a major producer of cotton (Edgar 1998:271). Between 1794 and 1800 South Carolina's cotton production increased from less than 100,000 pounds to 20 million pounds. This helps explain both the explosion of wealth, and slavery, in the South Carolina backcountry.

Edgar offers a few glimpses of Union District's slavery. Commenting on the regime of cotton, one Union slave remembered, "we picked cotton by de light of de moon" (Edgar 1998:315). Equally telling is the account of Union District's William Farr who bequeathed half of his $60,000 (nearly $1 million in 2001 dollars) estate in trust "for the care of his mulatto mistress and their child" (Edgar 1998:307).

Very little Civil War activity took place in the Union district. However, Sherman's army passed along its eastern boundary in 1864, traveling up the Broad River on their way to Charlotte, North Carolina.

After the Civil War, a steady rise in industrial and commercial development brought many changes stimulating growth in the economy and population. Although Union County is reported to have suffered immeasurable monetary loss in its investments into Confederate currency, a general prosperity seemed to have returned as soon as the late 1860s, with trading reopening in the spring of 1867.

Immediately after the Civil War cotton prices peaked, causing many Southerners to focus, once again, on cotton. The largest problem, however, was labor. While some freedmen stayed on to work, others wished to have part in growing cotton for others and left. The hiring of freedmen began immediately after the war with variable results.

In 1884 the labor system of Union County was described as sharecropping (News and Courier 1884). Sharecropping required the tenant to pay his landlord part of the crop produced. The tenant supplied the labor and one-half of the fertilizer, the landlord supplied everything else — land, house, seed, tools, work animals, animal feed, wood for fuel, and the other half of the needed fertilizer.

The report indicated that about two-thirds of the field labor was being supplied by African Americans, although the Union County reporter complained that "for the younger ones [African Americans], with very few exceptions, it is difficult to conceive a more hopeless outlook than they offer." Regardless, male labor was paid about $100 a year, while females garnered only $50 a year. There were about 400 farms worked by whites and 300 worked by blacks.

In the 1870s and 1880s the manufacture of cotton developed rapidly. The post-Civil War economy's need for a cash crop was readily met by intensive "one-crop" cotton farming. In the 1880s, of the 87,900 acres planted in crops, 43,950 were planted in cotton. The remaining acreage was planted in corn (12,850 acres), oats (15,00 acres), wheat (12,000 acres), rye and barley (1,500 acres), and sweet potatoes (2,600 acres). Despite the large quantity of cotton being planted, none was being milled in the district in this period. Manufactories consisted primarily of flour, grist, and lumber mills (News and Courier 1884). There were no cotton mills at the time.

In spite of the sense of prosperity, Union was a Klan hotbed. The Writers' Program (1941) briefly mentions one riot in the area which claimed the lives of several African American militiamen. Edger remarks that, "violence was one of the legacies of Civil War and Reconstruction, especially of the insurgency (1868-1877) mounted by the state's white minority against the Reconstruction regime" (Edgar 1998:417).

The value of the yearly cotton crop in the city of Union was quite high, only to be outdone by Columbia and Anderson. By 1907 Union County had six cotton mills including, Aetna, Excelsior, Jonesville, Lockhart, Monarch, and Union Buffalo (South Carolina Department of Agriculture, Commerce, and Immigration 1907:462). Since these mills were constructed in rural areas with no urban support, they had to provide housing for their workers. The promise of steady work and housing which was maintained by the mill attracted a large number of landless whites (mostly tenants and sharecroppers) to leave their rural homes at the turn of the century.

Although the working conditions were often poor, the hours long, the wages low, and the young children often exploited, life in the mill village was thought to be an improvement over the

living conditions that most workers had formerly led in the rural areas.

In 1920 Union County reported 2,817 farms encompassing 251,453 acres, or about 89 acres per farm. Of this there were 112,301 acres of improved farm land, or nearly 40 acres (45%) per farm. The average farm value was $4,221 ($34,359 in 2001dollars). Yet 75.9% of the farms were operated by tenants, and 86.3% of these were African Americans.

While cotton prices began high early in 1921, the dropped quickly and steadily — to the point where farmers had paid nearly twice as much planting their cotton as they would see in return. This began a decade of severe agricultural depression.

Figure 8. *General Transportation and Highway Map of Union County*, dated 1950, showing the project area.

As were all areas, Union County was hit hard by the 1929 depression. Agricultural lands were in poor condition. Much of the topsoil had washed away and though the additional of fertilizers helped, continued erosional practices offset their benefits. With the economic difficulties, animosities arose between town and country, management and worker, landowner and tenant.

Union County, in 1930, saw the number of farms reduced to 2,538. The average size was down to 74.1 acres and of this acreage, only 43% was improved. The average value of the farm dropped to $2,111 ($21,036 in 2001 dollars). The number being operated by tenants rose slightly, to 76.3%, although the outward migration of African Americans resulted in only 67% of the tenants being black. The economic condition is also clearly indicated by the mortgage rate. Statewide a third of the farms were mortgaged. In Union County the number was slightly higher — around 35%. In neighboring Laurens County, however, the problem was far worse, with 43% of the farms mortgaged.

Cotton production suffered dramatic reductions. The 42,728 acres planted in cotton for 1920 was reduced to 36,536 acres. And Union County's yield was only 13,270 bales in 1930. Nevertheless, Union County remained a predominantly rural area with agriculture as its leading pursuit.

Figure 8 shows the project area in 1950. US 176 (today SC 18) follows the approximate route of the main northerly road shown on Mills' *Atlas*. Mills' "Meeting House" is shown in 1950 as the "Upper Fair Forest Ch." The County Home (today the Ellen Sagar Nursing Home and Switzer Residential Care) is shown constructed by this time and what is today the Union County Detention Center is shown as a "correctional facility" (on the USGS topographic map it is shown as the "Prison Camp").

Previous Archaeological Investigations

The bulk of archaeological investigations

in Union County consist of surveys in the Sumter National Forests or surveys associated with highway construction. Most of this work suggests that both historic and prehistoric sites are located on ridges or ridge noses (see, for example, Cable et al. 1978; Price 1993). Although no mills were located by Price (1993) in his survey of several forest stands in the Sumter Nation Forest, Mills' *Atlas* (1825) indicates that they were numerous and are usually found adjacent to creek and river shoals. During an archaeological survey of the Abner and Maple Creek proposed sewer line, Adams and Trinkley (1992:12) located the remains of a structure adjacent to shoals which may have served as a mill. While these structures appear difficult to identify archaeologically, there are no high probability mill locations in the survey tract.

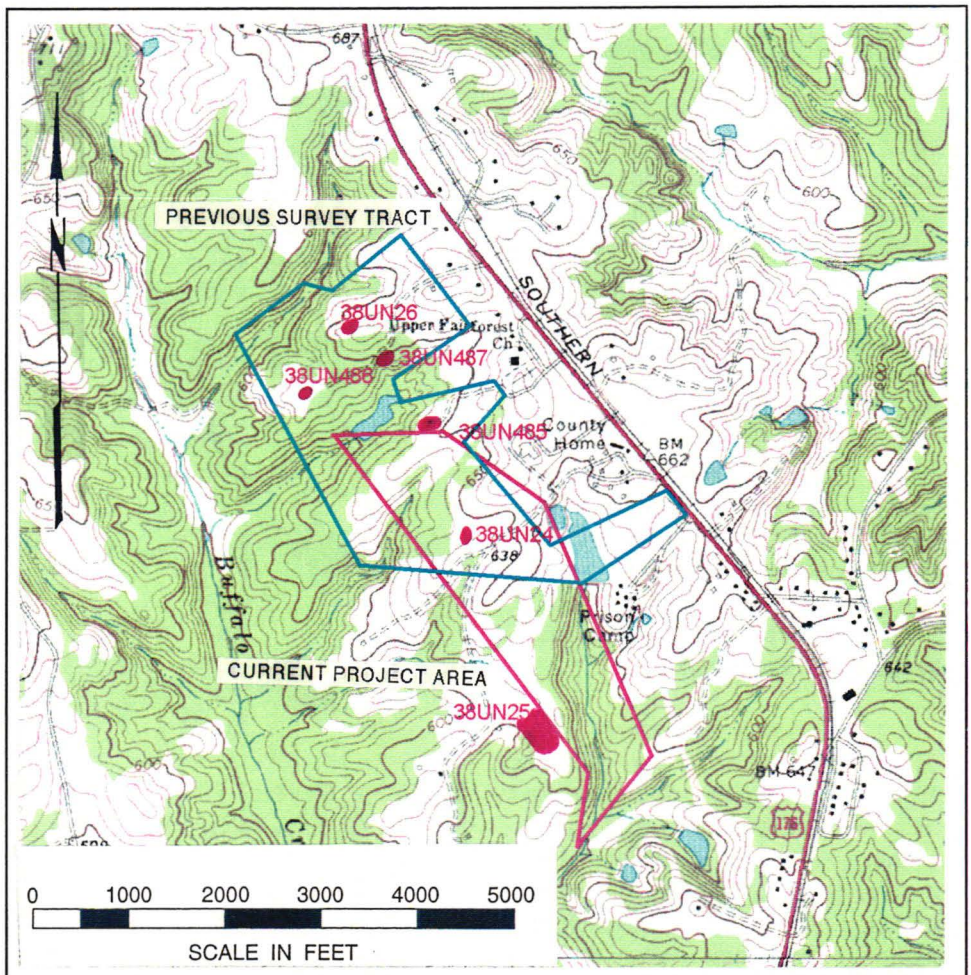

Figure 9. Jonesville USGS topographic map showing the location of previously identified archaeological sites in the project area, as well as the boundaries of the 1993 industrial tract survey.

Very little historical archaeology has been conducted in the county. The only site to have received any excavation, albeit limited, is 38UN1, Pinckneyville, by Dick Carrillo (1972). Pinckneyville was established in 1791 to serve as a judicial district seat for the present Chester, Spartanburg, Union and York. The town was only in existence for nine years.

A survey by Cable et al. (1978) located three sites in the study area. These include 38UN24, 38UN25, and 38UN26, described as small prehistoric lithic scatters. 38UN24 was located on a plowed ridge top overlooking Buffalo Creek and measured 30 square meters. Artifacts included one quartz Savannah River projectile point base, one quartz Morrow Mountain projectile point, and two pieces of quartz debitage. While 38UN25 was recorded as covering an area measuring about 650 feet square, it was heavily eroded and only 15 prehistoric artifacts (as well as one historic ceramic) were recovered. Site 38UN26 was located on a fallow ridge top and measured 30 square meters. Artifacts included one quartz possible Guilford projectile point base, and four quartz flakes. None of the sites were

recommended as eligible for inclusion on the National Register of Historic Places.

Chicora Foundation conducted an archaeological survey of the initial 105 acre industrial tract site in 1993 (Adams 1993; see Figure 9). As a result of that investigation three additional sites were identified, 38UN485-487. Two of these sites (38UN485 and 38UN487) are historic scatters, perhaps representing early to mid-twentieth century tenant or farm units. The third site, 38UN486, represented a small scatter of prehistoric and historic remains. While two quartz biface fragments were recovered, no prehistoric diagnostics were found. The historic remains were twentieth century, although not in sufficient quantity to suggest a domestic context. All three sites were recommended not eligible.

In addition, an examination for the two previously recorded sites, 38UN24 and 38UN26, proved unsuccessful. It was suggested at the time that, "since both sites contained few remains, it is likely that they were completely collected during the previous survey or by local collectors" (Adams 1993:12).

Because of the presence of several ridges and ridge noses, well drained soils, previously identified sites, and the proximity of Buffalo Creek and several intermittent streams, the project area was believe to have a high probability of containing both historic and prehistoric sites. The likelihood, however, of identifying any sites with good contexts (high integrity) was considered low as a result of extensive erosion and heavy modifications of the property.

METHODS

Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100-foot intervals along transects laid out every 100 feet. All soil would be screened through ¼-inch mesh, with each test numbered sequentially by transect. Each test would measure about 1.0 foot square and would normally be taken to a depth of at least 1.5 foot or until subsoil was encountered. In the areas of standing water, no shovel tests would be excavated. In areas of steep slopes transects and shovel tests would be reduced to 200 foot intervals. A series of recent investigations (see, for example, Trinkley 2000) have revealed that steep slopes combined with documented erosion dramatically reduce the potential for recovery of intact archaeological remains. The use of 200 foot intervals allows such areas to be examined using shovel testing, as well as visually inspected. Notes would be maintained for profiles at any sites encountered.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 25 feet area) be identified during the study, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 25 foot intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

A series of 42 transects were laid out running southwest-northeast from US 176 to the side of the tract adjacent to the existing industrial park at 100 foot intervals (Figure 10). Transects 1 through 29 had shovel tests excavated at 100 foot intervals, with a total of 289 shovel tests.

Beginning at Transect 30 and continuing through Transect 34 shovel tests were excavated at 100 foot intervals on the more level areas, but switched to 200 foot intervals once the drainage slopes were reached. On these five transects a total of 37 shovel tests were excavated.

On transects 35 through 42 all shovel tests were excavated at 200 foot intervals because of the steep slopes and extensive erosion. A total of 26 shovel tests were excavated in this area.

Combined, a total of 352 shovel tests were excavated in the study tract. Profiles consistently revealed either a red (2.5YR4/6) clay loam or a red clay, indicating the complete loss of the overlying A horizon and, often, the loss of much of the underlying B horizon. Where an A horizon of grayish-brown (10YR5/2) sandy clay loam was found it was only 0.1 foot in depth and appears to represent a very recent development. Many areas within the tract exhibited terracing for previous agriculture. While this terracing was useful in reducing soil erosion the process of construction itself was very destructive of the natural soil profile.

The GPS positions were taken with a Garmin GPS 12XL rover that tracks up to twelve satellites, each with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a vital consideration for the study area.

GPS accuracy is generally affected by a number of sources of potential error, including errors with satellite clocks, multipathing, and selective availability. Satellite clock errors can occur when the satellites's clock is off by a little as a millisecond, or when a slightly-askew orbit

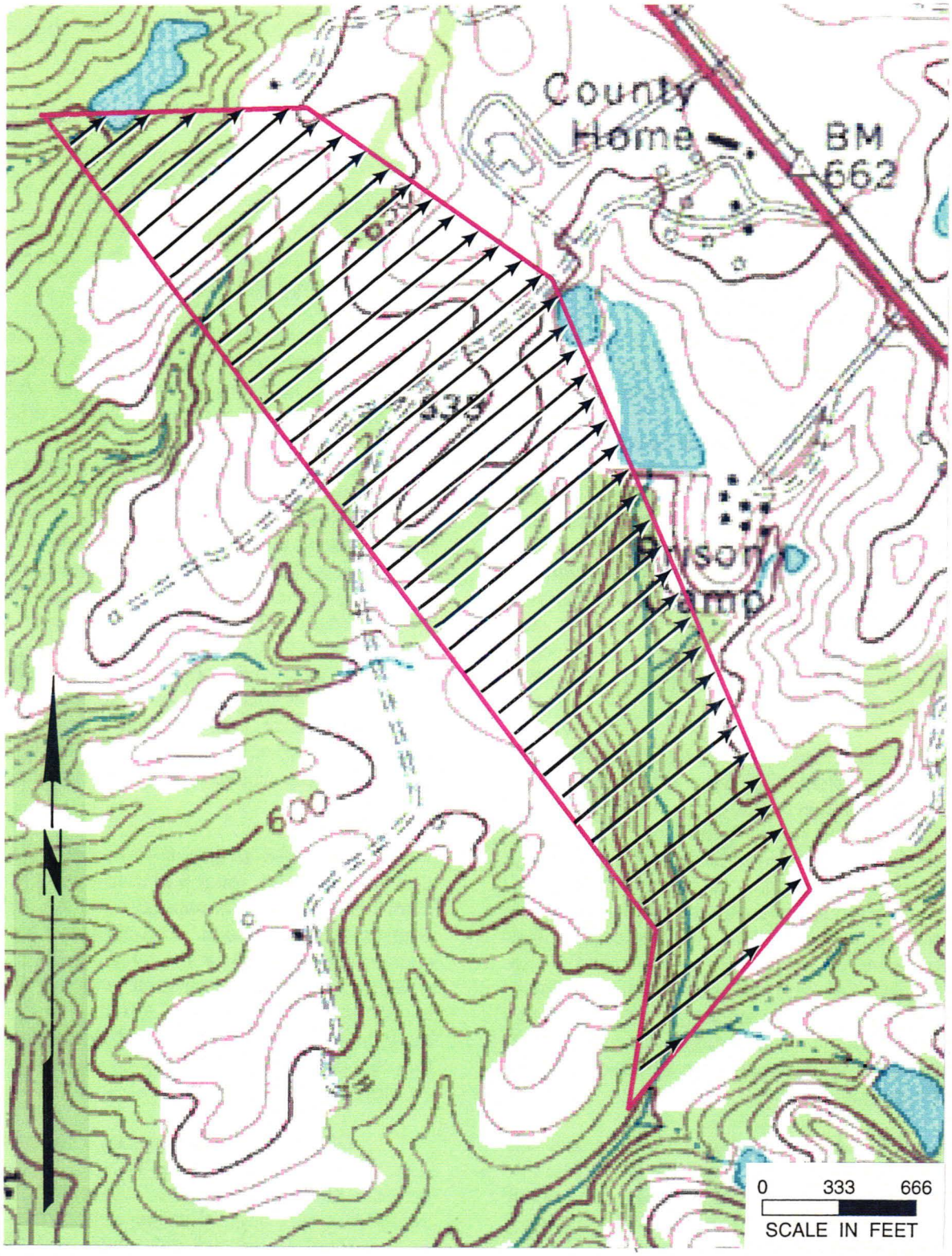

Figure 10. Transects in the survey tract.

results in a distance error. Multipathing occurs when the signal bounces off trees, chain-link fences, or bodies of water. Multipathing was probably not a significant source of error for this study since the site area was cleared and our reading was taken in the center of the site. The source of most extreme GPS errors is selective availability (SA), the deliberate mistiming of satellite signals by the Department of Defense. This degradation results in horizontal errors of up to 100 m 95% of the time, although the error may be as much as 300 m. Nevertheless, selective availability has been turned off by the DOD. We have previously determined the 3D[1] and DGPS readings with the Garmin 12XL were identical. Therefore, we relied on 3D navigation mode, with expected potential horizontal errors of 6 m or less.

Architectural Survey

As previously discussed, we elected to use a 1.0 mile area of potential effect (APE). The architectural survey would record buildings, sites, structures, and objects which appeared to have been constructed before 1950 and which retained their integrity. Those which have undergone such extensive modifications to preclude their eligibility were not recorded.

For each identified resource an architectural survey form would be completed and one or two representative photographs would be taken. Permanent control numbers would be assigned by the S.C. Department of Archives and History at the conclusion of the study. The site forms for the resources identified during this study would then be submitted with this study for eventual submission to the South Carolina State Historic Preservation Office by our client.

The survey was conducted by driving the public roads (typically county or state secondary roads) in the APE. For this study the examined roads included SC 18 (Jonesville Highway), Oak Grove Road (S-408), Edgewood Drive, Bonham Station Road, Kelly Road, and Camelot Road.

The background research on any individual properties found would be more limited than is the case on county-wide local history surveys. We would collect all of the information readily available to us in the field. In other words, where we find residents willing to discuss their property, we take advantage of this to collect additional information. We do not, however, pursue individuals who were not at home, attempt to make contact with others in the area, or aggressively seek out property owners. We do not propose to conduct deed research, nor did we search newspaper archives for property-specific citations.

Site Evaluation

Sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the

[1]A basis requirement for GPS position accuracy is having a lock on at least four satellites, which places the receiver in 3D mode. This is critical – as an example, positions calculated with less than four satellites can have horizontal errors in excess of a mile, or over 1,600 m.

> lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site, providing a framework for the evaluative process;
- identification of the important research questions the site might be able to address, given the data sets and the context;
- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and
- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

For architectural sites the evaluative process would be somewhat different. Given the relatively limited architectural data likely available for most of the properties, we anticipate evaluating these sites using National Register Criterion C, focusing on the site's "distinctive characteristics." Key to this concept is the issue of integrity. This means that the property needs to have retained, essentially intact, its physical identity from the historic period.

Particular attention would be given to the integrity of design, workmanship, and materials. Design includes the organization of space, proportion, scale, technology, ornamentation, and materials. As *National Register Bulletin* 36 observes, "Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact" (Townsend et al. 1993:18). Workmanship is evidence of the artisan's labor and skill and can apply to either the entire property or to specific features of the property. Finally, materials — the physical items used on and in the property — are "of paramount importance under Criterion C" (Townsend et al. 1993:19). Integrity here is reflected by maintenance of the original material and avoidance of replacement materials.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site form for the identified archaeological site has

been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes have been prepared for curation using archival standards and will be transferred to the South Carolina Institute of Archaeology and Anthropology as soon as the project is complete.

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. In general, the temporal, cultural, and typological classifications of historic remains follow such authors as Price (1970) and South (1977).

The primary raw material identified in the lithic collections was quartz, which was usually a translucent white, but occasionally yellowish-brown, or nearly clear (quartz crystal). This material is found throughout the Carolina Piedmont and might have been obtained from either veins or as cobbles in Piedmont river gravels.

Another material was chert, which represents a extralocal raw material, likely coming from the Coastal Plain.

Debitage categories might include primary (defined as flakes with 90% or more cortex), secondary (defined as having less than 90% cortex), or interior (defined as having no cortex). These categories, widely used, are briefly explained by Yohe (1996:54-56; for further information see Blanton et al. 1986 or Oliver et al. 1986).

Shatter is often called chunks by other researchers. Either term is typically applied to angular pieces of debitage of various sizes. They lack observable striking platforms, dorsal and ventral faces, or other characteristics of flakes. These items are often, although not always blocky and angular. Shatter is thought to have been produced in greatest numbers in the very earliest stages of tool production.

Points, also called hafted bifaces by some, are symmetrical, pointed bifaces which are modified for hafting. The diagnostic lithic remains were compared to published typological descriptions for the various projectile points such as Coe (1952, 1964), Oliver (1981), and South (1959). Items which can not be securely identified because of damage or which lack the often definitive basal sections are classified simply as bifaces.

At this survey level tools are defined very simply, being placed in broad morphological categories. Our laboratory methods, for example, define a biface as an artifact with flakes removed on both sides (not distinguishing between preforms, early stage reductions, and so forth); a core is a piece of raw material from which flakes have been removed; an end scraper is a blade tool with at least one convex end which exhibits a steep angle; a used flake is a chip of stone that was used as a tool, exhibiting edge damage or wear; and a side scraper is a flake tool in which one of the long edges was retouched to serve as the scraping edge. These definitions generally follow those provided by Yohe (1996).

RESULTS

Introduction

As a result of this cultural resources survey one archaeological site (38UN869) and nine architectural resources (Jonesville 0049-0057) were identified. The archaeological site is recommended not eligible as a result of extensive disturbance reducing the resource's integrity. Seven of the nine architectural resources are recommended not eligible, primarily as a result of changes that compromise their integrity or because they lack individual significance. One resource, 0055, the Union County Detention Center, is recommended potentially eligible under Criteria A and C. Site 0054, the Fairforest Baptist Church Cemetery, is recommended potentially eligible under Criteria C and D.

The location of these resources is shown in Figure 11.

Archaeological Resources

38UN869

Site 38UN869 is a surface scatter of prehistoric lithics and a single fragment of historic ceramic situated on a ridge top and northeast facing side slope. The site elevation is about 640-650 feet AMSL and it is about 1,200 feet east of a branch of Buffalo Creek. Topography in the area is undulating, but the site is situated on an area of reduced slopes.

Typical vegetation in the area consists of planted pines, although the site itself is found on an old field which is fallow and beginning second growth (Figure 12). All of the artifacts were found on the exposed red clay at the surface of the heavily eroded field. A central UTM coordinate for the site is E441360 N3846700 (NAD27 datum). The site is accessible from US 176 and is about 1,500 feet northwest of the highway.

Although shovel tests were completed at the originally proposed 100-foot intervals, with Transects 19 through 21 bisecting the site, only one of these shovel tests (ST 13 on T20) actually fell within the identified site area and all of the tests were negative, revealing only heavily eroded soil.

The site was identified based on surface material found between shovel tests and based on this pedestrian survey the site boundaries were determined to be approximately 400 feet east-west by about 75 feet north-south. Dispersed materials appear to hug the edge of the field, in the immediate vicinity of a red clay field road.

A series of eight additional shovel tests were excavated across the long-axis (WNW-ESE) of the site. Each of these additional tests was negative.

The shovel tests all revealed profiles resembling Madison soils, although extensive erosion was evident. This series typically has an A or Ap horizon of grayish-brown sandy loam to a depth of 0.5 foot, over a red clay loam which grades into a stiff red clay at about 2 feet. In the site area we found no A horizon and the underlying red clay loam was only 0.2 foot in depth. It appears that upwards of 1.5 to 2.0 feet of soil has been lost in this area.

The surface collection, in spite of generally good surface visibility, produced only nine specimens. Recovered were two quartz biface fragments, one soapstone bowl fragment, one chert flake, four quartz flakes, and one fragment of whiteware. While no diagnostics were recovered, the soapstone is suggestive of the Archaic Period.

Site 38UN869 has produced a very limited number of data sets. Although the recovery of the soapstone fragment is intriguing, the data sets are still limited to two tools, one vessel fragment, and five flakes. There is no evidence of any subsurface

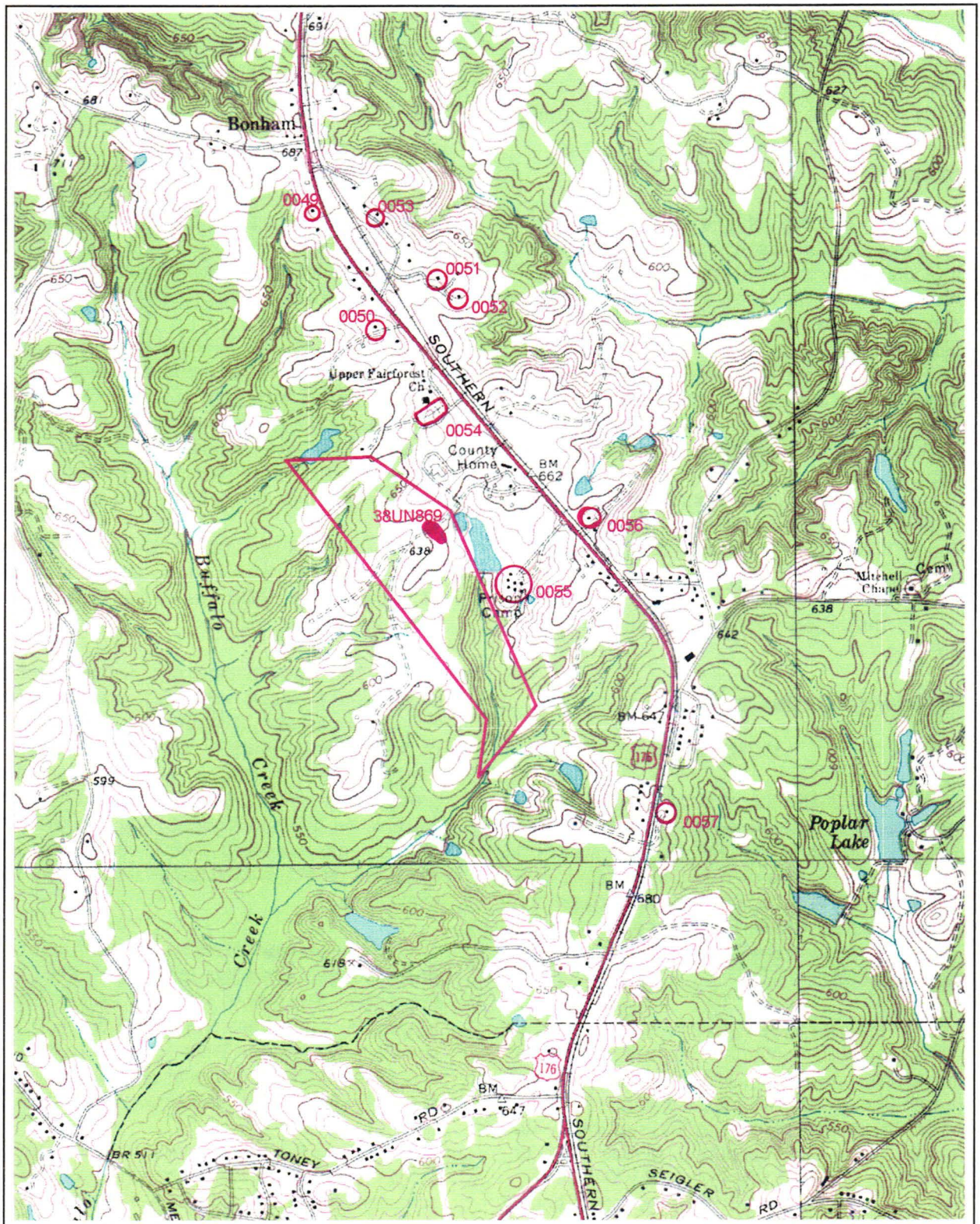

Figure 11. Cultural resources identified in the project area (basemap is Jonesville 7.5' USGS).

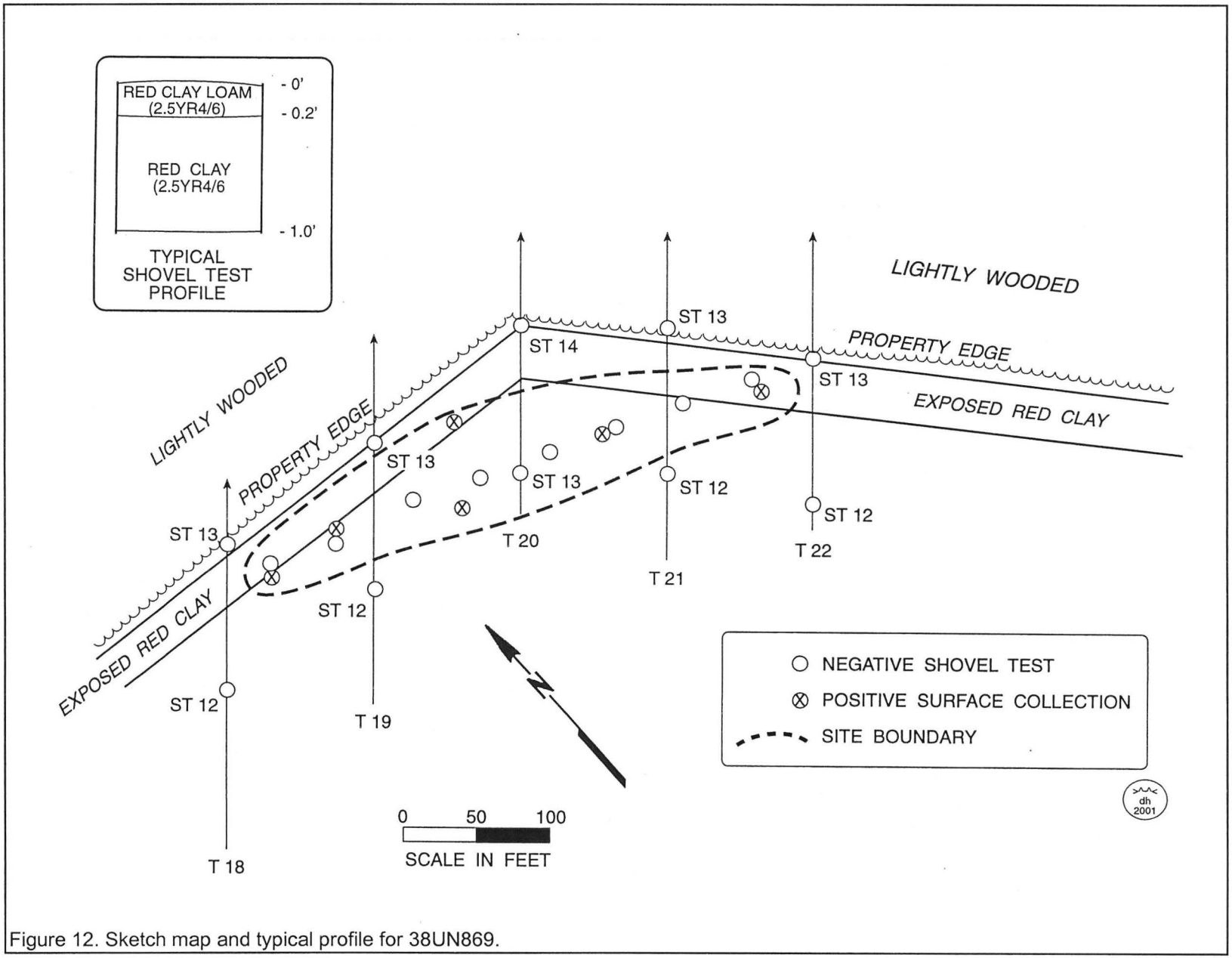

Figure 12. Sketch map and typical profile for 38UN869.


Figure 13. View of 38UN869, looking north.

materials or features. The materials recovered have likely seen considerable movement on the site and there was no clustering of remains that might suggest the site exhibits horizontal patterning or stratigraphy. The quantity of remains is also very limited, perhaps resulting from previous collection episodes. It is also possible that the artifacts were lost (or dispersed) through the erosion process — which has significantly affected the integrity of the site.

This combination of limited data sets and extensive erosion make it unlikely that the site can address any significant research questions. The lack of diagnostic material even makes it difficult to pose the simplest temporal questions.

Consequently, we recommend the site as not eligible for inclusion on the National Register of Historic Places. Pending the review and concurrence of the lead agency and the State Historic Preservation Office, no additional management activities are recommended.

Other Archaeological Resources

As revealed by Figure 9, two sites had been previously identified within (or immediately adjacent to) the survey tract: 38UN24 and 38UN25. An effort to relocate 38UN24 during the initial industrial park survey in 1993 was unsuccessful and it was thought that the site was probably completely collected during its original discovery.

Efforts were again made to relocate these sites. When the transect shovel tests failed to identify any remains, additional close interval testing was conducted. These efforts also proved fruitless — and we again conclude that the sites,


Figure 14. Structure 049, east (front) facade, looking west.

Figure 15. Structure 0050, east (front) and north facades, looking southwest.

containing very sparse remains, no longer exist.

Architectural Sites

Structures

Seven structures were identified within the 1.0 mile APE, all on or just removed from SC 18 (see Figure 11).

Site 0049 is the only I-house identified in the APE. This is a common Piedmont form, although unusual are the two front entrances similar to the double entrances found more commonly on hall and parlor houses. It was built ca. 1900 and modified ca. 1950. Modifications include the replacement of the original balustrade and balusters with 2x4s, the addition of metal awnings, the use of decorative shutters, and an addition at the left elevation. The structure is recommended not eligible because of these modifications.

Far more common in the survey area are massed plan structures. Resource 0050 is a massed plan house with a hipped roof. Also present is a centered front gable. The structure was constructed ca. 1910 and modified ca. 1970 with the addition of storm windows and door, a porch replacement, and a rear addition with an attached carport. Because these modifications have affected the integrity of the structure, we recommend it not eligible.

Structure 0052 is another massed plan building with a pyramidal roof. Also present is a shed roof front porch. This seems to be a relatively late structure, ca. 1950, with modifications, ca. 1965, including metal awnings as well as storm

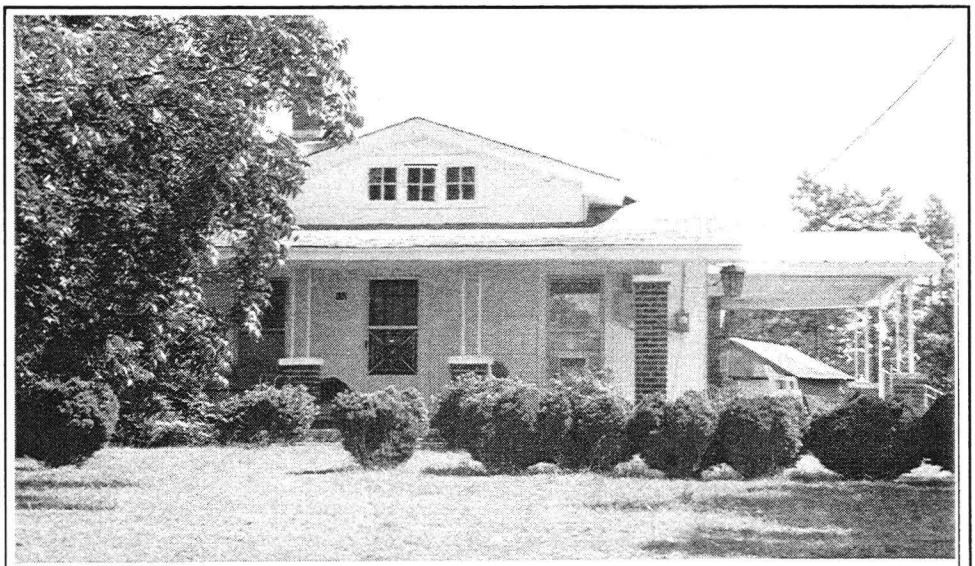

Figure 16. Structure 0053, southwest (front) facade, looking northeast.

Figure 17. Structure 0056, southeast (front) facade, looking northwest.

windows and door. Although the modifications are not as obvious as in some other examples, this structure is not individually significant and we recommend it not eligible.

Structure 0053 is a massed plan with a hipped roof, centered gabled dormer, and "Craftman" elements including decorative brackets under the front gable. It was constructed ca. 1940, with modifications dating to ca. 1960. These modifications include an added side porch, storm windows and door, the addition of vinyl siding at the eves, and replacement porch supports. We recommend this structure not eligible.

Structure 0056 is a massed plan, side gable house with a centered front gable and front porch with a hip roof. The front porch balustrade is a bow and picket iron fence railing added to more recent iron supports. This suggests extensive modifications of the porch elements. The structure dates ca. 1940, with modifications ca. 1960 including vinyl siding at the eves and storm windows and door. The modifications at the structure are severe and we recommend it not eligible.

Structure 0057 is the last massed plan building found during the survey. It, too, exhibits a side gable roof with a centered gable dormer. "Craftman" elements include exposed rafter tails, triangular knee braces, and double wood column porch supports on brick columns. It was constructed ca. 1930 and exhibits virtually no modifications, although it is currently vacant and beginning to deteriorate. While possessing considerable integrity, this structure does not appear to be individually significant and is recommended not eligible.

The last structure identified during the

Figure 18. Structure 0059, west (front) facade, looking east.

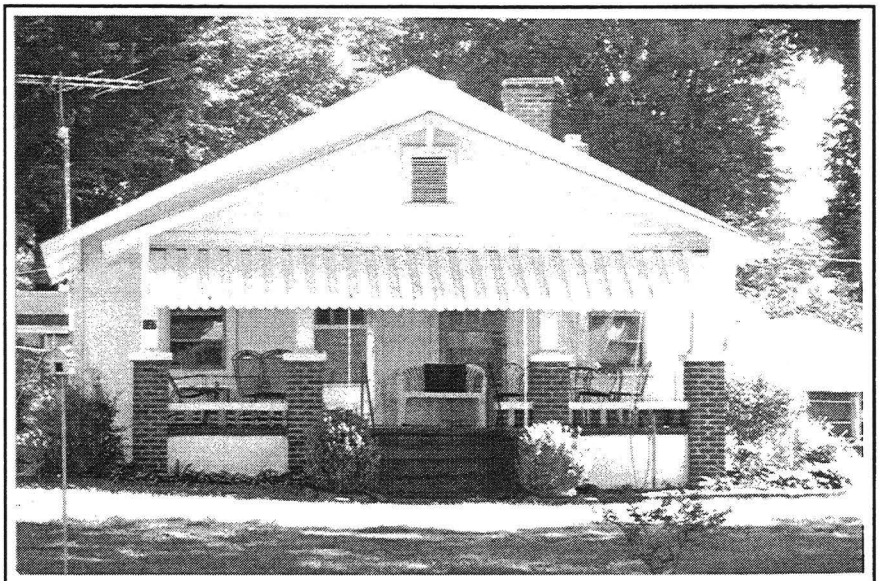

Figure 19. Structure 0051, west (front) facade, looking east.

survey is site 0051. This is the most "Craftsman-like" of the various houses surveyed. The porch is a separate gabled element. It was built ca. 1930, with modifications ca. 1950. These modifications include metal awnings and storm windows and doors. This site is recommended not eligible both because of these modifications and also because it is not considered individually significant.

Cemetery

One cemetery was also recorded during this study. Site 0054 is the Fairforest Church Cemetery. The associated church building is modern and is not included. The cemetery covers an area of about an acre and approximately 500 stones are present. These markers include a broad range of granite and marble commercial markers, including a number of common styles which were regionally available in the last quarter of the nineteenth and first quarter of the twentieth centuries. There are also a number of concrete markers which exhibit regional influences.

Also present, however, are fieldstone markers, including at least one with carving suggestive of the eighteenth century. There are also broad areas of the cemetery with rolling topography, suggestive of grave sites, but with no markers. Consequently, it appears reasonable that the cemetery is associated with the very late eighteenth and early nineteenth century Fairforest Baptist congregation.

The site is recommended potentially eligible for inclusion on the National Register under National Register Criteria C, distinctive design or physical characteristics and D, potential to provide important information about prehistory or history. The cemetery is characteristic of rural church

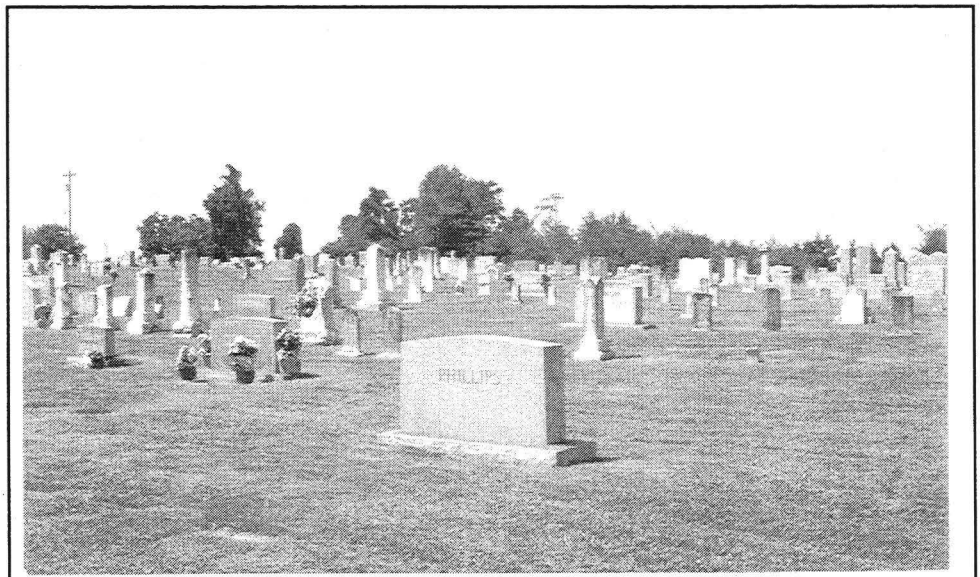

Figure 20. Site 0054 (Fairforest Church Cemetery), looking southwest.

Figure 21. "SAV" marker in Fairforest Church Cemetery.

cemeteries and the range and styles of markers represent a significant assortment of well preserved artistic efforts. In addition there is every probability that the site contains significant bioanthropological data. There is no indication of significant erosion or loss of cemetery data. The cemetery is situated on a hill, allowing for drainage. Consequently, it may be possible to not only examine the human remains for information concerning diet, disease, and health, but also to examine the grave articles, ranging from clothing to coffin hardware, for information on the social context of those being buried in this cemetery.

Chain Gang Camp

The final site, 0055, represents the Union County Chain Gang Camp, also known as the Prison Camp, and today as the Detention Center. The camp consists of nine standing, historic structures. Figure 22 provides a general view of the camp and may help the reader get a "feel" for the setting. It is located about 1,000 feet southwest of SC 18, so expansion on the highway has not affected the site through either noise or commercial intrusion. It maintains a very rural setting. The road to, and through, the camp is dirt. At the southwest edge of the camp cattle are still held, although the fields which were once cultivated are no longer present.

The nine structures all appear to be approximately contemporaneous. The more substantial buildings are of CMU construction, while the sheds are of pole construction. Roofs are primarily metal, although some composition shingles are today being used and the maintenance building has a very typical bowspring truss roof with asphalt roofing.

Figure 22. View of site 0055, Union County Detention Center, looking northeast.

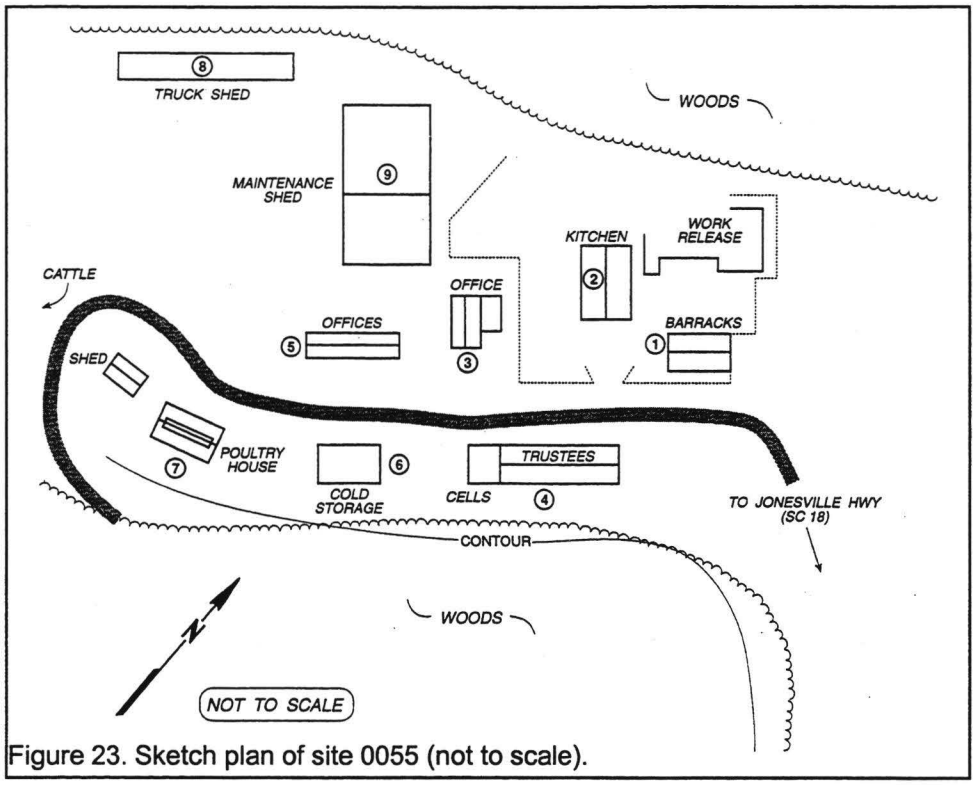

Figure 23. Sketch plan of site 0055 (not to scale).

The barracks consist of a rectangular CMU building with an end to front gable asphalt shingle roof. There are two exterior doors, each steel, leading to long barracks. Between is a third door leading to a guard room. The only modifications to the building have been the addition of window air conditioners and, at the rear of the building, modern forced air heating.

The kitchen and dining hall is a similar large, rectangular CMU structure with an end to front gable asphalt shingle roof. At the front elevation is an added shed porch area.

One of the more interesting buildings is a long structure broken into five individual rooms, each with one entrance and one awning type window. While one informant reported that these were storerooms and he remembered chains and balls being in the spaces, they were more likely used for housing either guards or trustees. Today they are exclusively used for storage.

At the end of these rooms is a square CMU compartment with a metal shed roof. An access door is situated on the left side of the front elevation. This opens into a hall off which to the right are three cells. One cell door is still intact and consists of metal into which a lockable opening is provided. The only "windows" are small metal

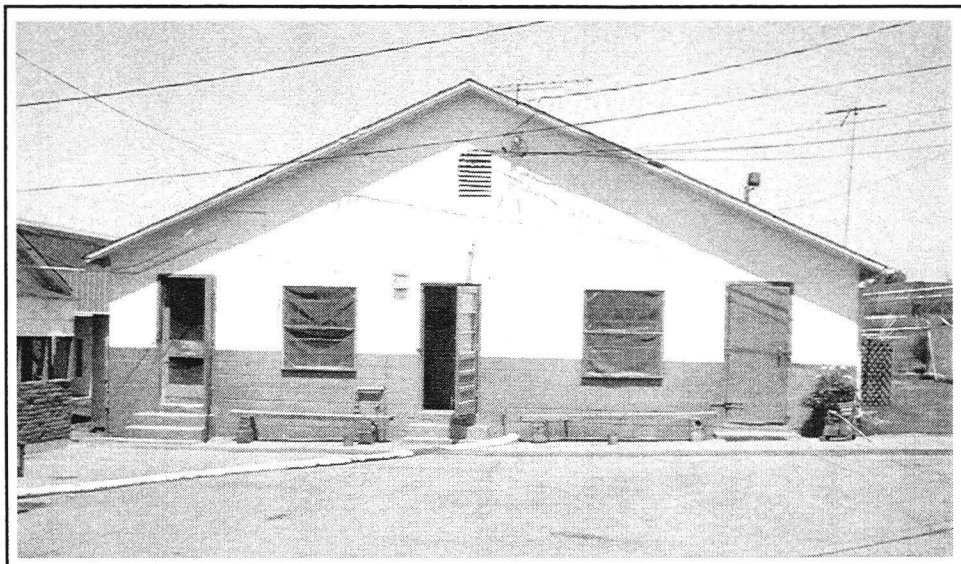
Figure 24. Site 0055, barracks (building no. 1 in Figure 23).

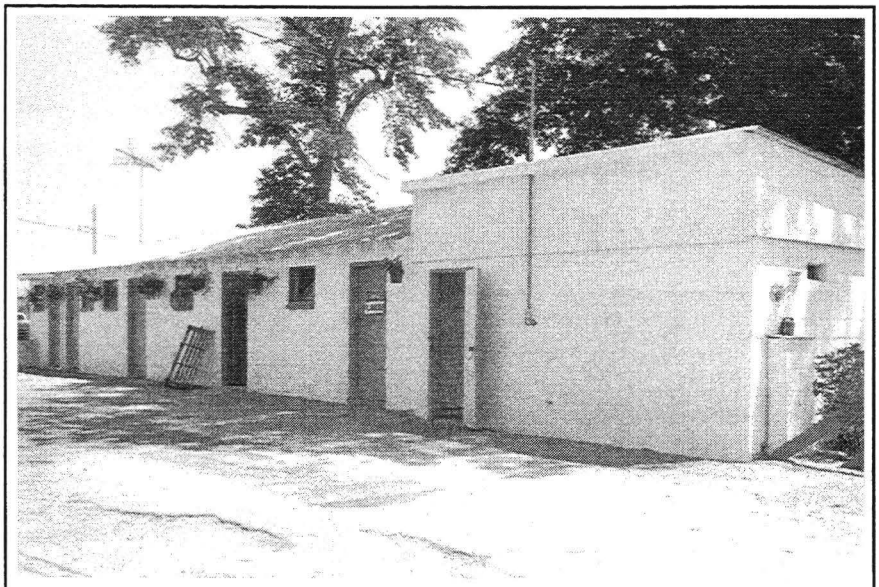

Figure 25. Site 0055, trustee rooms and cells (building no. 4 in Figure 23).

consists of metal into which a lockable opening is provided. The only "windows" are small metal vents on the side elevation, with one per cell. These served as isolation cells for inmates.

Another interesting building is the poultry house. The walls are frame with double hung windows on a CMU wall. This is the only building which reveals any serious concern with ventilation. The combination of double hung windows and ridge vents provide good ventilation. Also present are two flues for winter heating.

During this assessment Mr. Stanley Vanderford, Director of the Union County Development Board, confirmed that the prison camp was at least 50 years old since he could remember it as a child being at this location. He also identified Ms. Evenelle Pettit, whose father was the administrator of the nearby County Home (now demolished). She remembers the prison or "chain gang" camp into the 1930s and all of the present main structures date from at least the 1940s.

This complex is recommended potentially eligible for inclusion on the National Register of Historic Places under Criterion C, distinctive design or physical characteristics. The camp is a good example of early to mid-twentieth century county based prison architecture. Similarly constructed camps were common throughout South Carolina during this period, but most have been demolished. The Union County example is a rare, and well preserved, example of a previously very classic form of prison labor confinement. In addition, the site may be potentially eligible under Criterion A, association with historic events or activities, as representative of the use of prison labor for infrastructure maintenance in the rural

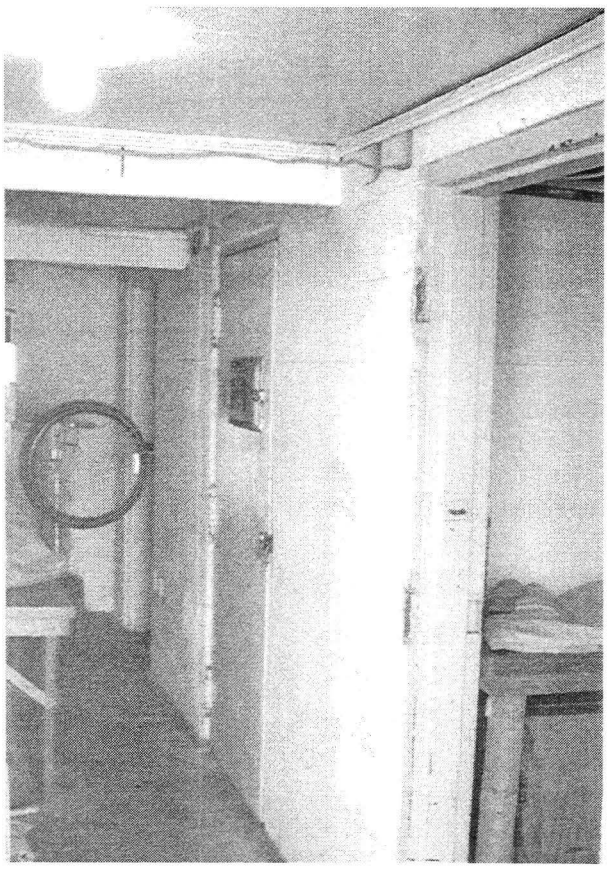

Figure 26. Interior hallway for the cells (building no. 4 in Figure 23).

Figure 27. Site 0055, poultry house (building no. 7 in Figure 23).

would include documentary research and the collection of oral history accounts. We understand, for example, that the Sheriff's Department retains account records from this time period for supplies and food. It is possible that additional county records exist specific to the property. It is also likely that additional individuals in the community remember the operation of the camp and can supply details concerning its daily operation.

Project Effects

The proposed project is likely to cause significant long-term changes in the rural character of the project area. Short-term effects may also include additional construction noise and dust.

The affect on site 0054, the Fairforest Cemetery, will likely be minimal, since the cemetery already abuts an existing section of the industrial park. Nevertheless, it is appropriate to recommend that any construction in the vicinity of the cemetery incorporate a visual barrier of at least 50 feet in order to minimize visual intrusion.

In contrast, site 0055, the Union County Detention Center, abuts directly on the industrial park expansion. As a result, it may be more directly, and significantly, affected by the proposed undertaking. The clearing of vegetation, altering of topography, and construction of modern metal industrial buildings may have a significant impact on the rural character and setting.

An appropriate mitigation measure may be to ensure that there is a well designed visual barrier between the industrial park and the Detention Center. At present this is achieved by the natural dense vegetation and rolling topography. Planners must ensure that the barrier remains intact by allowing sufficient lot sizes to permit a 50 to 100 foot buffer in the vicinity of the Detention Center.

CONCLUSIONS AND RECOMMENDATIONS

This study involved the examination of an approximately 98 acre tract proposed for the expansion of an existing industrial park in Union County, situated between US 176 and SC 18 north of the City of Union. This work, conducted for HSMM, Inc. of Spartanburg, examined archaeological sites and cultural resources found on the proposed corridor or within a 1.0 mile area of potential effects (APE). It is intended to assist HSMM help their client comply with their historic preservation responsibilities.

As a result of this investigation one archaeological site, 38UN869, was identified within the tract. This site represented a multi-component site represented by a single twentieth century whiteware ceramic and a small assemblage of probable Archaic remains. The site, however, produced no subsurface remains and the data sets were limited. Most significantly, the site exhibits extensive erosion, with the loss of perhaps 2.0 feet of surface soil. The sparse remains, combined with this loss of integrity, indicate that the site cannot address significant research questions. It is therefore recommended not eligible, pending the review of the lead agency and the State Historic Preservation Office.

An effort was also made to relocate two sites, 38UN24 and 38UN25, thought to be on or adjacent to the survey tract. Close interval shovel testing combined with pedestrian survey failed to reveal either site. It is likely that both were completely collected during their original recordation.

The architectural survey examined a 1.0 mile APE surrounding the proposed industrial tract expansion. Nine cultural resources were identified, all on or in close proximity to the main transportation route through the area, SC 18 (historically SC 176). Identified were seven structures, one cemetery, and one chain gang or prison camp.

The seven structures include one I-house, five massed plan houses, and one "Craftsman"-style cottage. These structures were in varying degrees of preservation and typically did not retain their integrity. Modifications which reduced integrity included the addition of vinyl siding, addition of storm windows, and non-historic rear or side structural additions. One structure, 0059, exhibited no outward modifications, but was in a deteriorating condition and, individually, was not considered significant.

The Fairforest Cemetery, 0054, is associated with Fairforest Baptist Church, although the church building is modern and is not included in the surveyed site. The cemetery is recommended potentially eligible under Criterion C, distinctive design or physical characteristics, and Criterion D, potential to provide important information about prehistory or history. This cemetery, while abutting an existing section of the industrial park, is about 1,000 feet northeast of the proposed expansion. Consequently, it seems unlikely that the current project will have any significant impact on the site or its visual surroundings. Nevertheless, we do recommend that a visual buffer, at least 50 feet in width, be established if possible between the industrial park and the cemetery.

The last site identified is the Union County Detention Center, 0055, previously known as the prison camp or chain gang camp. This complex consists of at least nine historic buildings dating at least to the 1940s and likely a decade earlier. The camp is recommended potentially eligible for inclusion on the National Register under Criteria C, distinctive design or physical characteristics. To achieve a determination of eligibility we believe that additional historic research, beyond the scope of the current survey, would be necessary. This would include examination of documentary sources, as well as the collection of oral histories relevant to the detention center.

This site is immediately adjacent to the proposed expansion and may be adversely affected by the proposed construction. At least part of the feeling and association of the site is contained in its rural setting. Loss of that setting, combined with economic pressures, could result in a significant loss of historic fabric. Consequently, we recommend at a minimum that the proposed industrial tract lots in the vicinity of this resource be designed to allow a 50 to 100 foot vegetative buffer. This would help minimize the visual intrusion into the camp site. The SHPO may have additional recommendations concerning the long-term preservation or documentation of this resource.

It is possible that archaeological remains may be encountered in the area during construction activities. As always, contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramic, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

SOURCES CITED

Abbott, Lawrence E., Jr., John S. Cable, Mary Beth Reed, and Erica E. Sanborn

1995 *An Archaeological Survey and Testing of the McLean-Thompson Property Land Acquisition, and the Ambulatory Health Care Clinic Project, Forth Bragg, Cumberland County, North Carolina*. Technical Report 349. New South Associates, Stone Mountain, Georgia.

Adams, Natalie

1993 *Archaeological Survey of a 105 Acre Industrial Park Tract and Sewer Lines, Union County, South Carolina.* Research Contribution 117. Chicora Foundation, Inc., Columbia.

Adams, Natalie and Michael Trinkley

1992 *Archaeological Survey of the Abner Creek and Maple Creek Sewer Line Right of Way, Spartanburg County, South Carolina*. Research Contribution 96. Chicora Foundation, Inc. Columbia, S.C.

Anderson, David G.

1979 *Excavation at Four Fall Line Sites: The Southeastern Columbia Beltway Project*. Commonwealth Associates, Inc.

1992 Models of Paleoindian and Early Archaic Settlement in the Lower Southeast. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth G. Sassaman, and Christopher Judge, pp. 28-47. Council of South Carolina Professional Archaeologists, Columbia.

Anderson, David G., Kenneth E. Sassaman, and Christopher Judge (editors)

1992 *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective.* Council of South Carolina Professional Archaeologists, Columbia.

Anonymous

n.d. *South Carolina Statewide Survey of Historic Places Survey Manual.* S.C. Department of Archives and History, Columbia.

Bense, Judith A.

1994 *Archaeology of the Southeastern United States: Paleoindian to World War I.* Academic Press, New York.

Blanton, Dennis B., Christopher T. Espenshade, and Paul E. Brockington, Jr.

1986 *An Archaeological Study of 38SU83: A Yadkin Phase Site in the Upper Coastal Plain of South Carolina*. Garrow and Associates, Inc., Atlanta.

Braun, Lucy

1950 *Deciduous Forests of Eastern North America*. Hafner Publishing, New York.

Brooks, Richard D. and David C. Crass

1991 *A Desperate Poor Country: History and Settlement Patterning on the Savannah River Site, Aiken and Barnwell Counties, South Carolina*. Savannah River Archaeological Research Papers

2. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Cable, John S.
1982 Differences in Lithic Assemblages of Forager and Collector Strategies, In *Archaeological Survey and Reconnaissance Within the Ten-Year Floodpool Harry S. Truman Dam and Reservoir*, edited by Richard Taylor. Report submitted to the U.S. Army Corps of Engineers, Kansas City District.

Cable, John S., Charles E. Cantley, and Jim S. Sexton
1978 *A Study of Prehistoric Utilization of the Inter-riverine Piedmont: the U.S. 176 By-Pass Survey from Union to Pacolet, South Carolina.* Research Manuscript Series 131. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Camp, Wallace J., J.C. Meetze, W.H. Fleming, and L.E. Andrew
1975 *Soil Survey of Laurens and Union Counties, South Carolina.* U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.

Carrillo, Richard F.
1972 *Excavations at Pinckneyville, Site of Pinckney District, 1791-1800.* Notebook 4(1):2.

Chapman, Jefferson
1977 *Archaic Period Research in the Lower Little Tennessee River Valley, 1975: Icehouse Bottom, Harrison Branch, Thirty Acre Island, Calloway Island.* Report of Investigations 18. University of Tennessee, Knoxville.

1985a Archaeology and the Archaic Period in the Southern Ridge-and-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 137-179. The University of Alabama Press, University.

1985b *Tellico Archaeology: 12,000 Years of Native American History.* Reports of Investigations 43, Occasional Paper 5, University of Tennessee, Knoxville.

Charles Tommy and James L. Michie
1992 South Carolina Paleo Point Data. In *Paleoindian and Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective*, edited by David G. Anderson, Kenneth G. Sassaman, and Christopher Judge, pp. 242-247. Council of South Carolina Professional Archaeologists, Columbia.

Coe, Joffre
1952 The Cultural Sequence of the Carolina Piedmont. In *Archaeology of the Eastern United States*, edited by J.B. Griffin, pp. 301-311. University of Chicago Press, Chicago.

1964 *The Formative Cultures of the Carolina Piedmont.* Transactions of the American Philosophical Society, Vol. 54, Part 5, Philadelphia.

1995 *Town Creek Indian Mound: A Native American Legacy.* University of North Carolina Press, Chapel Hill.

Daniel, I. Randolph
1992 Early Archaic Settlement in the Southeast: A North Carolina Perspective. In *Paleoindian and*

Early Archaic Period Research in the Lower Southeast: A South Carolina Perspective, edited by David G. Anderson, Kenneth G. Sassaman, and Christopher Judge, pp. 68-77. Council of South Carolina Professional Archaeologists, Columbia.

Edgar, Walter
1998 *South Carolina: A History*. University of South Carolina, Columbia.

Ferguson, Leland G.
1971 *South Appalachian Mississippian*. Ph.D. dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor, Michigan.

Goodyear, Albert C., III and Glen T. Hanson
1989 *Studies in South Carolina Archaeology: Essays in Honor of Robert L. Stephenson*. Anthropological Studies 9. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Goodyear, Albert C., John H. House, and Neal W. Ackerly
1979 *Laurens-Anderson: An Archaeological Study of the Inter-Riverine Piedmont*. Anthropological Studies 4. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Gunn, Joel D. and Kathy Wilson
1993 *Archaeological Data Recovery Investigations at Sites 38CT54 and 38CT58 Along the S.C. 151 Jefferson Bypass, Chesterfield County, South Carolina*. Garrow and Associates, Raleigh. Submitted to the S.C. Department of Highway and Public Transportation, Columbia.

Haselton, George M.
1974 Some Reconnaissance Geomorphological Observations in Northwestern South Carolina and Adjacent North Carolina. *Geologic Notes* 18(4):60-67.

Johnson, Thomas F.
1970 *Paleoenvironmental Analysis and Structural Petrogenesis of the Carolina State Belt near Columbia, South Carolina*. Unpublished M.S. Thesis, Department of Geology, University of South Carolina, Columbia.

Kennedy, Fronde
1940 *A History of Spartanburg County*. Spartanburg Unit of the Writer's Program of the Works Progress Administration, Band and White, n.p.

Küchler, A.W.
1964 *Potential Natural Vegetation of the Conterminous United States*. Special Publication No. 36. American Geographical Society.

Landers, H.
1975 Climate. In *Soil Survey of Laurens and Union Counties, South Carolina*, edited by Wallace J. Camp, pp. 62-63. U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.

Latimer, W.J., E.B. Deeter, S.O. Perkins, W. Edward Hearn, and C. van Duyne.
1924 *Soil Survey of Spartanburg County, South Carolina*. Bureau of Soils, United States Department of Agriculture, Washington, D.C.

Logan, John H.
1859 *A History of the Upper Country of South Carolina from the Earliest*

Periods to the Close of the War of Independence. S.C. Courtney, Columbia.

Lowry, M.W.
1934 *Reconnaissance Erosion Survey of the State of South Carolina.* U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.

Michie, James L.
1977 *The Late Pleistocene Human Occupation of South Carolina.* Unpublished Honor's Thesis, Department of Anthropology, University of South Carolina, Columbia.

Mills, Robert
1972 [1826] *Statistics of South Carolina*. Hurlbut and Lloyd, Charleston. 1972 facsimile ed. The Reprint Company, Spartanburg, South Carolina.

News and Courier
1884 *South Carolina in 1884: A View of the Industrial Life of the State.* The News and Courier, Charleston, S.C.

Oliver, Billy
1981 *The Piedmont Tradition: Refinement of the Savannah River Stemmed Point Type.* Unpublished M.A. Thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

1985 Tradition and Typology: Basic Elements of the Carolina Projectile Point Sequence. In *Structure and Process in Southeastern Archaeology*, edited by Roy S. Dickens and H. Trawick Ward, pp. 195-211. The University of Alabama Press, University

Oliver, Billy L., Stephen R. Claggett, and Andrea Lee Novick
1986 Lithic Analysis. In *Indian and Freedmen occupation at the Fish Hall Site (38BU805), Beaufort County, South Carolina,* edited by Michael Trinkley, pp. 183-207. Research Series 1. Chicora Foundation, Inc., Columbia.

Phelps, David S.
1983 Archaeology of the North Carolina Coast and Coastal Plain: Problems and Hypotheses. In *The Prehistory of North Carolina: An Archaeological Symposium*, edited by Mark A. Mathis and Jeffrey J. Crow, pp.1-52. North Carolina Division of Archives and History, Department of Cultural Resources, Raleigh.

Price, Cynthia
1979 *19th Century Ceramics in the Eastern Ozark Boarder Region.* Monograph Series 1. Center for Archaeological Research, Southwest Missouri University, Springfield.

Price, T. Jeffery
1993 *Piedmont South Carolina: A Cultural Resources Survey of Selected Timber Stands in Sumter National Forest, South Carolina.* Southeastern Archaeological Services, Inc., Athens.

Ryan, Thomas M.
1972 *Archaeological Survey of the Columbia Zoological Park, Richland and Lexington Counties, South Carolina.* Research Manuscript Series 37. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Sassaman, Kenneth E.
1983 *Middle and Late Archaic Settlement in the South Carolina Piedmont*. Unpublished master's thesis. Department of Anthropology, University of South Carolina, Columbia.

1993 *Early Woodland Settlement in the Aiken Plateau: Archaeological Investigations at 38AK157, Savannah River Site, Aiken County, South Carolina*. Savannah River Archaeological Research Papers 3. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1995 The Cultural Diversity of Interactions Among Mid-Holocene Societies in the American Southeast. In *Native American Interactions: Multiscalar Analyses and Interpretations in the Eastern Woodlands,* edited by M.S. Nassanmey and K.E. Sassaman. University of Tennessee Press, Knoxville.

Sassaman, Kenneth E. and David G. Anderson
1990 Typology and Chronology. In *Native America Prehistory of the Middle Savannah River Valley,* edited by Kenneth E. Sassaman, Mark J. Brooks, Glen T. Hanson, and David G. Anderson, pp.143-216. Savannah River Archaeological Research Publication 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1994 *Middle and Late Archaic Archaeological Records of South Carolina: A Synthesis for Research and Resource Management*. Council of South Carolina Professional Archaeologists, Columbia.

Sassaman, Kenneth E., Mark J. Brooks, Glen T. Hanson, and David G. Anderson
1990 *Native American Prehistory of the Middle Savannah River Valley*. Savannah River Archaeological Research Papers 1. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Shelford, Victor E.
1963 *The Ecology of North America*. University of Illinois Press, Urbana.

South Carolina Department of Agriculture, Commerce, and Immigration
1907 *Handbook of South Carolina: Resources, Institutions and Industries of the State*. The State Company, Columbia.

South, Stanley
1959 *A Study of the Prehistory of the Roanoke Rapids Basin*. Master's thesis, Department of Sociology and Anthropology, University of North Carolina, Chapel Hill.

1977 *Method and Theory in Historical Archaeology*. Academic Press, New York.

Swanton, John R.
1946 *The Indians of the Southeastern United States*. Bulletin 137. Bureau of American Ethnology, Washington, D.C.

Taylor, Richard
1984 *Cultural Resources Survey of the Proposed Pee Dee Electric Generating Facility, Florence County, South Carolina*. Commonwealth Associates, Inc.

Townsend, Jan, John H. Sprinkle, Jr., and John Knoerl
1993 *Guideline for Evaluating and Registering Historical Archaeological Sites and Districts*. National Register Bulletin 36. US Department of the Interior, National Park Service, Interagency Resource Division, National Register of Historic Places.

Trimble, Stanley W.
1974 *Man-Induced Soil Erosion on the Southern Piedmont, 1700-1970*. Soil Conservation Society of America. Ankey, Iowa.

Trinkley, Michael
1976 *A Typology of Thom's Creek Pottery from the South Carolina Coast*. Unpublished Master's thesis. Department of Anthropology, University of North Carolina, Chapel Hill.

1980 *Additional Investigations at Site 38LX5*. South Carolina Department of Highways and Public Transportation, Columbia.

2000 *Archaeological Survey of the Proposed 91 Acre Miles Mine Tract, Kershaw County, South Carolina*. Research Contribution 288. Chicora Foundation, Inc., Columbia.

Trinkley, Michael, Debi Hacker, and Natalie Adams
1993 *Life in the Pee Dee: Prehistoric and Historic Research on the Roche Carolina Tract, Florence County, South Carolina*. Research Series 39. Chicora Foundation, Inc., Columbia.

U.S. Department of Agriculture
1983 *Yadkin-Pee Dee River Basin, North and South Carolina - Forest Resources*. USDA, Washington, D.C.

Ward, Trawick
1983 A Review of Archaeology in the North Carolina Piedmont: A Study of Change. In *The Prehistory of North Carolina: An Archaeological Symposium*, edited by Mark A. Mathis and Jeffrey J. Crow, pp. 53-81. North Carolina Division of Archives and History, Department of Cultural Resources, Raleigh.

Walthall, John A.
1980 *Prehistoric Indians of the Southeast: Archaeology of Alabama*. University of Alabama Press, University.

Waring, Antonio J., Jr.
1968 The Refuge Site, Jasper County, South Carolina. In *The Waring Papers: The Collected Works of Antonio J. Waring, Jr.*, edited by Stephen B. Williams, pp. 198-208. Papers of the Peabody Museum of Archaeology and Ethnology 58.

Williams, Stephen B., editor
1965 *The Paleo-Indian Era: Proceedings of the 20th Southeastern Archaeological Conference*. Bulletin 2. Southeast Archaeological Conference.

Writers' Program
1941 *South Carolina: The WPA Guide to the Palmetto State*. Oxford University Press, New York.

Yohe, Robert M., II
1996 Analysis of Flaked Stone Artifacts. In *Archaeological Laboratory Methods: An Introduction*, edited by Mark Q. Sutton and Brooke S. Arkush, pp. 39-68. Kendall/Hunt Publishing, Dubuque, Iowa.